H11399

NOAA FORM 76-35A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL OCEAN SURVEY

DESCRIPTIVE REPORT

Type of Survey: **Basic Navigable Area**

Registry Number: **H11399**

LOCALITY

State: **New York – New Jersey**

General Locality: **Raritan Bay**

Sub-locality: **Entrance to Raritan River & Arthur Kill**

2007

CHIEF OF PARTY
LT(jg) Matthew Jaskoski, NOAA

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DATE

NOAA FORM 77-28 (11-72) U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

REGISTRY NUMBER:

HYDROGRAPHIC TITLE SHEET

H11399

INSTRUCTIONS: The Hydrographic Sheet should be accompanied by this form, filled in as completely as possible, when the sheet is forwarded to the Office.

State:	**New York – New Jersey**		
General Locality:	**Raritan Bay**		
Sub-Locality:	**Entrance to Raritan River & Arthur Kill**		
Scale:	**1:10,000**	Date of Survey:	**04/23/07 to 02/25/08**
Instructions Dated:	**01/05/05**	Project Number:	**OPR-B310-NRT5-07**
Change No.1 Dated:	**N/A**		
Change No.2 Dated:	**N/A**		
Vessel:	**NOAA NRT-5, S3002**		
Chief of Party:	**LT(jg) Matthew Jaskoski, NOAA**		
Surveyed by:	**NOAA Navigational Response Team 5 Personnel**		
Soundings by:	**Kongsberg Simrad EM 3002 multibeam sonar**		
	Odom Echotrac C/V 200 Singlebeam echosounder		
Graphic record checked by:	**N/A**		
Protracted by:	**N/A**	Automated Plot:	**N/A**
Verification by:	***Atlantic Hydrographic Branch Personnel***		
Soundings in:	~~**Meters**~~ ***(feet)*** **at MLLW**		

Remarks:
1) All Times are UTC.
2) This is a Basic Navigable Area Hydrographic Survey.
3) Projection is UTM Zone 18.

Bold, Red, Italic notes were made during office processing.

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DESCRIPTIVE REPORT

to accompany
HYDROGRAPHIC SURVEY H11399

Scale of Survey: 1:10,000
Year of Survey: 2007
NOAA Navigation Response Team 5
LT(jg) Matthew Jaskoski, OIC

A. AREA SURVEYED

This hydrographic survey was conducted in accordance with Hydrographic Survey Letter Instructions for project OPR-B310-NRT5-04*, H11399 New York, NY. The original instructions are dated January 5, 2005.

This Descriptive Report pertains to an area of approximately 3.36 SNM, of Arthur Kill and Raritan Bay. The assigned registry number for this sheet is H11399, as prescribed in the Letter Instructions.

The purpose of the CY 2007 operations in this area were to provide contemporary surveys to update National Ocean Service (NOS) nautical charts as the Port of New York & New Jersey and approaches have been designated critical survey areas..

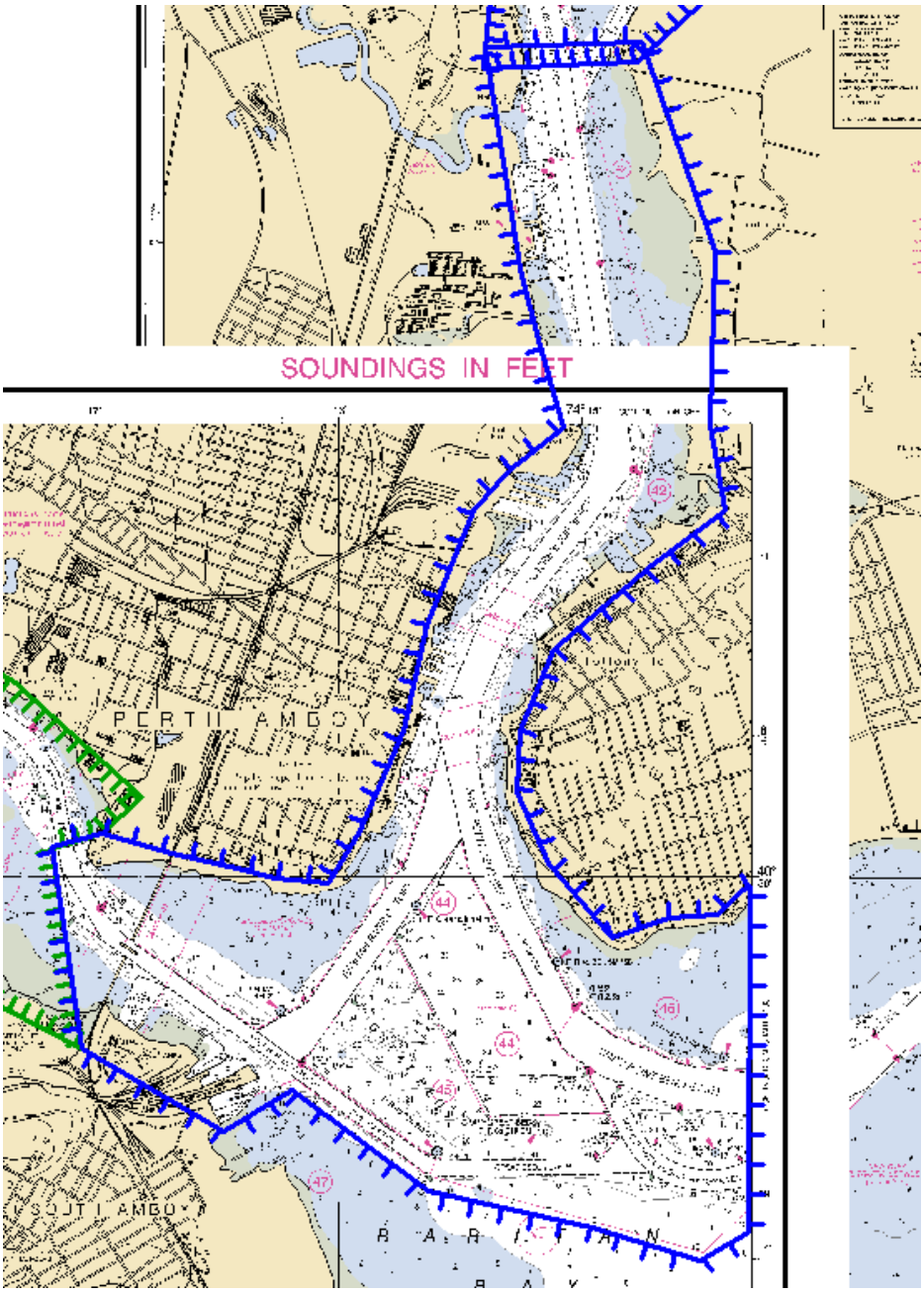
For complete survey limits, see figure A-1 on the following page.

Linear nautical miles of single beam only sounding lines - mainscheme only	35.3
Linear nautical miles of multibeam only sounding lines - mainscheme only	138.9
Linear nautical miles of side scan sonar only lines - mainscheme only	30.8
Linear nautical miles of any combination of the above techniques	205.0
Linear nautical miles of crosslines from single beam and multibeam combined	20.4
Linear nautical miles of developments other than mainscheme lines	5.3
Linear nautical miles of shoreline/nearshore investigation	0
Number of bottom samples collected	0
Number of items investigated that required additional time/effort in the field beyond the above survey operations	0
Total square nautical miles	3.36

Dates of acquisition: April 23, 2007 to February 25, 2008

Filed with original field reports.

Figure A-1: Outline of survey area



B. DATA ACQUISITION AND PROCESSING

B.1 EQUIPMENT

Data were acquired by NOAA NRT-5 S3002. NOAA Survey Vessel S3002 is a 9.12-meter aluminum SeaArk outboard driven vessel with an average multibeam transducer draft of 1.3 meters. ***Concur.***

NOAA S3002 acquired both bathymetry and imagery data. Side scan sonar data were acquired with a towed Klein 3000 sonar system. Bathymetry data were acquired with an Odom Echotrac C/V 200 single beam echosounder and a Kongsberg Simrad EM 3000 multibeam echosounder (MBES). Positioning and attitude were determined with a TSS POS/MV 320 (version 4) GPS aided inertial navigation system. ***Concur.***

No unusual vessel configurations or problems were encountered. Refer to the 2007 Data Acquisition and Processing Report (DAPR***) for detailed equipment and vessel configuration information. ***Concur.***

B.2 QUALITY CONTROL

B.2.1 Side Scan Sonar Quality Control

Daily confidence checks were made by observing the outer ranges of the side scan sonar images. A good check consisted of distinguishing linear contacts across the entire range of the side scan trace. No unusual problems were encountered. ***Concur.***

200% SSS bottom coverage was collected for this survey project at 75 m range scale.

B.2.2 Multibeam Echosounder Quality Control

In shallow areas (approximately 3m water depth) there was a noticeable across-track data dropout. Areas of data dropout were generally less than 0.5m in along track distance. This was observed to be a systemic error that has persisted over the use of the sonar and has been noted by other field units using the EM3000. The dropout was mitigated by manually overriding the maximum ping rate of the sonar. Data meets along track resolution requirements for IHO order 1. Other than the above, there were no faults with the SWMB system which affected data integrity. For detailed discussion of SWMB system calibrations, data acquisition, and data processing refer to this project's DAPR***. ***Concur.***

Filed with original field reports.

B.2.3 Total Propagated Error

Total Propagated Error (TPE) parameters for sound speed and tide data for H11399 are shown in table B-1. The estimated tidal error contribution to the total survey error budget in the vicinity of New York Harbor is 0.21meters at the 95% confidence level; this value includes the estimated gauge measurement error, tidal datum computation error, and tidal zoning error as provided by CO-OPS. The 1-σ value applied in post-processing was 0.105 meters. Sound speed TPE values were used in accordance with HSTP guidelines regarding frequency of surface and water column sound speed measurements. ***Concur.***

Table B-1. Total Propagated Error parameters.

Total Propagated Error Values			
Tide Values		Sound Speed Values	
Measured	Zoning	Measured	Surface
0.0	0.105	4.0	0.2

B.2.4 Fieldsheets and Navigation Surfaces

Caris HIPS uncertainty weighted BASE surfaces were created for this project. For MBES data surfaces were created and submitted at 0.75m resolution. An uncertainty weighted BASE surface was created for VBES data at 5.00m resolution. The MBES BASE surface finalized weighted grid is included in the digital PSS. Table B-2 lists all surfaces submitted with this survey. ***MBES surfaces were recomputed during office processing using CUBE with the Deep parameter to facilitate minor data cleaning. The CUBE surface will be used for H-Cell compilation.***

Table B-2: H11399 bathymetry surfaces, and Side Scan mosaic resolutions.

H11399 Bathymetry surfaces and SSS mosaic			
Fieldsheet	Surface/Mosaic Name	Grid Type	Resolution
H11399	H11399_MBES_BASE_75cm	Uncertainty Weighted	0.75m
H11399	H11399_MBES_BASE_75cm_Final	Uncertainty Weighted	0.75m
H11399	H11399_VBES_BASE_5m	Uncertainty Weighted	5.00m
H11399	H11399_VBES_BASE_5m_Final	Uncertainty Weighted	5.00m
H11399	H11399_1m	SSS Mosaic	1.00m

B.2.5 Single Beam Quality Control

There were no unusual events associated with the collection of the Single Beam data for this project. Refer to the project DAPR* for detailed discussion of VBES system calibrations, data acquisition, and data processing. ***Concur.***

B.2.6 Crosslines

Approximately 20.4 linear NM of crosslines were acquired, this is 12% of the combined MBES and VBES mainscheme bathymetry linear NM. A total of 19 linear NM of MBES crosslines were run; this was approximately 14% of the total linear NM of MBES lines run. A visual examination of approximately 10% of crossline-mainsheme common areas showed general agreement between crosslines and mainscheme lines to within 1-2 feet. All beams met 90% order oneness, please refer to the separates section of this report for Caris generated QC tables. A total of 1.36 linear NM of VBES crosslines were run; this was approximately 4% of the total linear NM of VBES lines run. Visual comparison junction areas showed general agreement to within 1-2 feet between crosslines and mainscheme VBES lines. No VBES Crosslines were acquired within the limits of the federal channels. For a list of all crosslines acquired for this project, tabulated by DN and line file name, please refer to the processing logs located in the separates* section of this report. ***Concur.***

B.2.7 Junctions

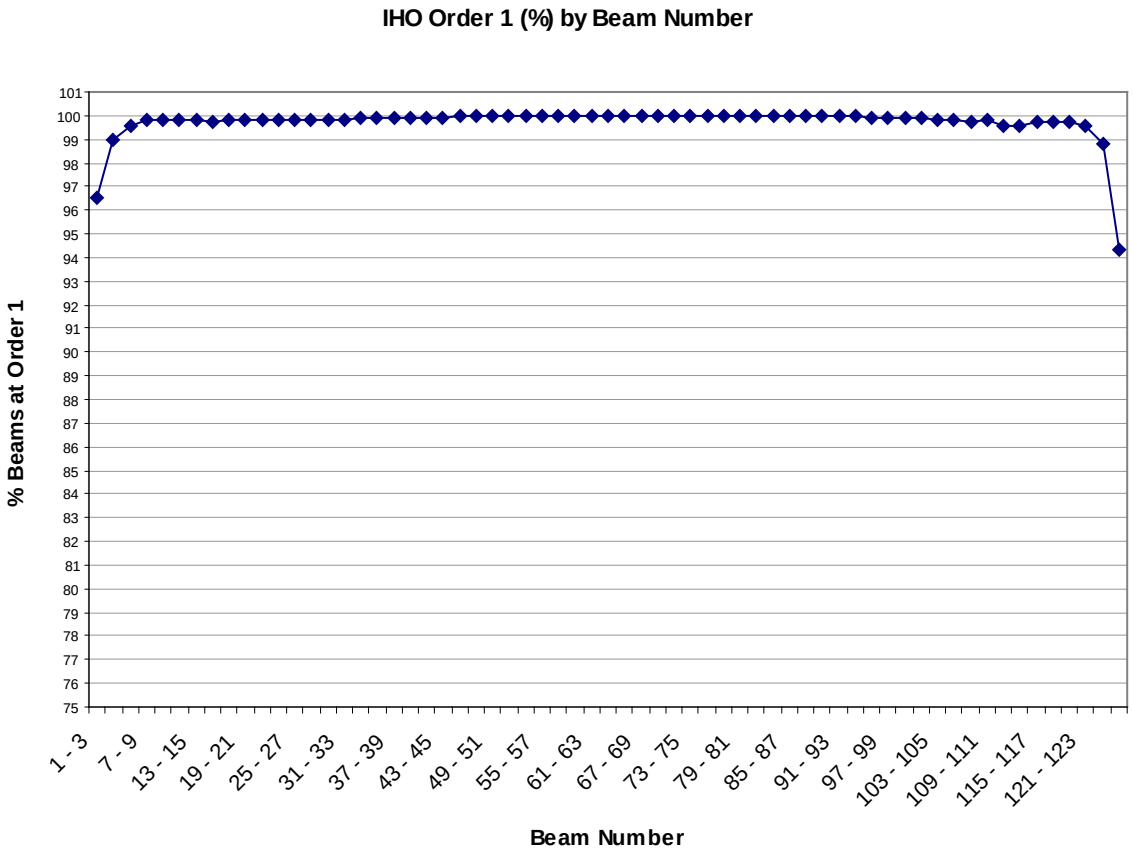
Survey H11399 junctions with contemporary survey H11398. Visual examination of junction areas showed agreement between bathymetry data to within < 1 ft. ***Concur.***

B.3 CORRECTIONS TO ECHO SOUNDING

All methods or instruments used were as described in the project DAPR*. All sound velocity casts are included in the digital PSS. ***Concur.***

****Filed with original field reports.***

FIGURE B-1: Caris QC Report, IHO order Oneness v. Beam Number



C. VERTICAL AND HORIZONTAL CONTROL *See also the Evaluation Report.*

C.1 VERTICAL CONTROL

The tidal datum for this project is Mean Lower Low Water (MLLW). The operating National Water Level Observation Network (NWLON) station at Sandy Hook (853-1680) served as datum control for the survey area, Bergen Point (851-9483) was the secondary gauge. ***Concur.***

A Request for Approved Tides was sent to N/OPS1 on April 14, 2008 (Appendix III***). Verified tides from the N/OPS1 CO-OPS website were downloaded and applied to all sounding data. ***Concur with clarification. Final tide zoning was applied by the field unit.***

C.2 HORIZONTAL CONTROL

The horizontal datum used for this survey is the North American Datum of 1983 (NAD 83), projected using UTM zone 18. ***Concur.***

Sounding positional control was determined using the Global Positioning System (GPS) corrected by U.S. Coast Guard differential GPS (DGPS) beacon station. The DGPS beacon used for this survey was Sandy Hook, NJ. No horizontal control stations were established for this survey. ***Concur.***

Horizontal dilution of precision (HDOP) was monitored during acquisition, and did not exceeded 4.00. Adequate satellite coverage was maintained throughout the survey period. ***Concur.***

****Filed with original field reports.***

D. RESULTS AND RECOMMENDATIONS *See also Evaluation Report.*

D.1 CHART COMPARISON

The charts affected by this survey are:

Chart Number	*Edition*	*Edition Date*	*Scale*
12327	100th	07/01/2007	1:40000
12331	31st	07/01/2005	1:15000
12332	22nd	01/01/2006	1:15000

ENC Cell Name
US5NJ11M
US5NJ12M

D.1.1 General Agreement with Charted soundings

Sounding data generally agreed with charted depths to within 1-2 feet, navigationally significant differences from charted depths are addressed in Appendices II **** Concur.***

D.1.2 AWOIS Items and Significant Contacts

There were six AWOIS items within the survey limits of H11399. Of these six, two (AWOIS 4537 and 12536) were inshore of the Navigable Area Limit Line (NALL) and were not fully investigated. All other AWOIS items were investigated to the NALL. For full description and hydrographer recommendations of all assigned AWOIS items see appendix II*****, Sec 3. ***Concur.***

D.1.3 Dangers to Navigation

One DToN was submitted for survey H11399 on February 20, 2008. For full description and hydrographer recommendations of the DToN see Appendix I***** and II*****

D.1.4 Charted Features

Hydrographer recommended changes to charted items are listed in Appendix II***** of this report as well as in the digital PSS. All charted items not specifically addressed in Appendix II***** are recommended to be retained as charted by the hydrographer. ***Concur.***
****Attached to this reports.***

D.1.5 Charting Recommendations

Hydrographer recommendations for discreet items are included in Appendix II* of this report as well as in the digital PSS. Survey H11399 is complete and adequate to supersede charted soundings in their common areas. ***Concur.***

D.2 ADDITIONAL RESULTS

D.2.1 Aids to Navigation

No AToNs within the survey limits of H11399 were found to be significantly off station. See Appendix V*, section V.3. ***Concur.***

D.2.2 Bridges and Overhead Cables

There are two bridges in the survey area, the hydrographer has no charting recommendations regarding these items. ***Concur.***

D.2.3 Submarine Cables and Pipelines

There are two charted submarine cable areas within the survey limits of H11399, no cables were positioned during this survey, nor were any images of these items acquired on SSS trace. ***Concur.***

Filed with original field reports.

E. APPROVAL SHEET

OPR-B310
Raritan Bay
New York – New Jersey

Entrance to Raritan River & Arthur Kill
Survey Registry No. H11399

Field operations for this survey were conducted under my daily supervision with frequent checks of progress and adequacy. All field sheets, bathymetry models, this Descriptive Report, and all accompanying records and data are approved.

Submitted in association with this descriptive report has been a series of reports and data:

2007 Data Acquisition and Processing Report (submitted with this report)

This survey is adequate to supersede all prior surveys in common areas, and for application to the relevant NOS nautical charts.

Respectfully,

Matthew Jaskoski
2008.05.08 11:17:51
-04'00'

LT(jg) Matthew Jaskoski, NOAA
OIC NRT-5

APPENDIX I

DANGERS TO NAVIGATION REPORT

H11399 DToN Report 1

Registry Number: H11399

State: New Jersey

Locality: Raritan Bay

Sub-locality: Entrance to Raritan River Arthur Kill

Project Number: OPR-B310-NRT5-07

Survey Date: 4/23/2007

Charts Affected

Number	Version	Date	Scale
12332	22nd Ed.	01/01/2006	1:20000
12327	99th Ed.	10/01/2006	1:40000
12300	45th Ed.	03/01/2005	1:400000
5161	13th Ed.	10/01/2003	1:1058400
13003	48th Ed.	10/01/2004	1:1200000
14500	27th Ed.	10/01/2002	1:1500000

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude
1.1	2621/99 Sandy Point Wreck	Wreck	7.81 m	40° 30' 05.955" N	074° 17' 03.852" W

1.1) 2621/99 Sandy Point Wreck

DANGER TO NAVIGATION

Survey Summary

Survey Position: 40° 30' 05.955" N, 074° 17' 03.852" W

Least Depth: 7.81 m

Timestamp: 2008-039.15:17:45.148 (02/08/2008)

Survey Line: h11399 / 3002_mbes / 2008-039 / 026_1512

Profile/Beam: 2621/99

Charts Affected: 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, preliminary tides applied. The contact appears to be debris or wreckage near a charted 30' sounding.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-039/026_1512	2621/99	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424150100	0001	5.30	004.7	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as a wreck least depth and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

25ft (12332_1, 12327_1)

4 ¼fm (12300_1, 13003_1, 14500_1)

7.8m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

CONVIS - 2:not visual conspicuous

HEIGHT - 1.04 m

TECSOU - 2:found by side scan sonar

VALSOU - 7.807 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

OFFICE NOTESS

Concur - Chart wreck with a depth of 25 feet in Latitude40° 30' 05.955" N, Longitude 074° 17' 03.852" W. Add 25 Wk and danger curve.

Feature Images

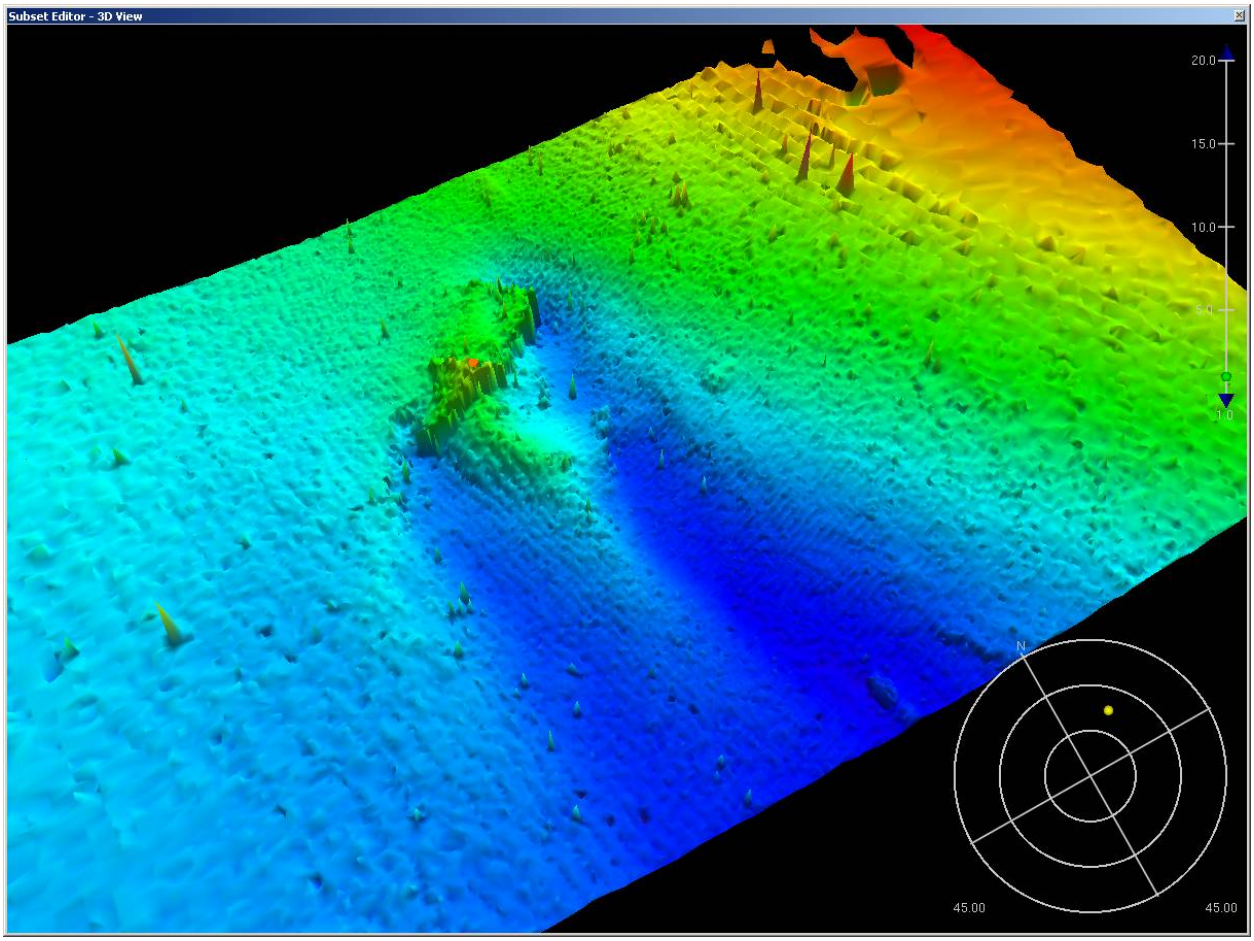


Figure 1.1.1

Figure 1.1.2

APPENDIX II

SURVEY FEATURES REPORT

H11399 - AWOIS Items

Registry Number: H11399

State: New Jersey

Locality: Raritan Bay

Sub-locality: Entrance to Raritan River Arthur Kill

Project Number: OPR-B310-NRT5-07

Survey Date: 10/01/2007

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12331	31st	07/01/2005	1:15,000 (12331_1)	USCG LNM: 03/04/2008 (04/15/2008) CHS NTM: None (01/25/2008) NGA NTM: 02/27/1999 (04/26/2008)
12332	22nd	01/01/2006	1:20,000 (12332_1)	USCG LNM: 03/04/2008 (04/15/2008) CHS NTM: None (01/25/2008) NGA NTM: None (04/26/2008)
12327	101st	04/01/2008	1:40,000 (12327_1)	USCG LNM: 04/29/2008 (06/03/2008) NGA NTM: 06/17/2006 (06/07/2008)
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
1.2	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
1.3	UNKNOWN	AWOIS	[no data]	[no data]	[no data]	---
1.4	OBSTRUCTION	AWOIS	[no data]	[no data]	[no data]	---
1.5	AWOIS 12556	Wreck	3.28 m	40° 32' 20.6" N	074° 14' 58.4" W	12556
1.6	AWOIS 12554	Wreck	2.82 m	40° 32' 15.8" N	074° 14' 56.8" W	12554

1.1) AWOIS #4537 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 40° 30' 33.2" N, 074° 15' 19.3" W

Historical Depth: [None]

Search Radius: 60

Search Technique: VS,DI,SD

Technique Notes: [None]

History Notes:

D9/79--CES 12331, OPR-B408-WH-79, ITEM K; SOUTHERN WRECKAGE AREA DELINEATED ON■ 8/2/79 BY FOUR POSITIONS. AREA CONTAINS WRECKS AND PIER RUINS. POS. GIVEN ■ IS ON PIER RUINS AND IS THE NORTHERN MOST POINT CLOSEST TO CHANNEL. SOUTHERN ■ MOST POINT CLOSEST TO CHANNEL IS PIER RUINS IN POS. LAT.40-30-26.99N, ■ LONG.74-15-22.93W. (ENTERED, 3/87, MCR)

Survey Summary

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The item is located beyond the NALL, and was not investigated.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B310-NewYork-AWOIS	AWOIS # 4537	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be retained as charted.

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

1.2) AWOIS #12535 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 40° 31' 50.3" N, 074° 14' 48.9" W

Historical Depth: [None]

Search Radius: 150

Search Technique: MB,ES,S2,SD,DI

Technique Notes: [None]

History Notes:

BP-103726--ITEM WAS FOUND ON TP SHEET 00750 AND SCALED TO THE CHART.

Survey Summary

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The navigable area was covered with 100% Simrad EM3000 MBES, two OBSTNs were positioned within the AWOIS search radius. The item is charted as a wreck, however there was no item appearing to be a wreck was seen in the bathy data. The item is near a charted wreckage area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B310-NewYork-AWOIS	AWOIS # 12535	0.00	000.0	Primary

Hydrographer Recommendations

The hydrograper recommends the three objects positioned within the search radius be charted as OBSTNs (see Section 2, 2.16 "3001/122 OBSTN", 2.17 "4364/24 OBSTN" and 2.37 "4358/121 OBSTN") The hydrographer also recommneds AWOIS item 12535 be removed from the chart.

S-57 Data

[None]

Office Notes

Concur - Delete dangerous sunken wreck. See also final charting recommendations for obstructions discussed above in Appendix 2.

1.3) AWOIS #12536 - UNKNOWN

No Primary Survey Feature for this AWOIS Item

Search Position: 40° 32' 29.5" N, 074° 14' 54.5" W

Historical Depth: [None]

Search Radius: 150

Search Technique: MB,ES,S2,SD,DI

Technique Notes: [None]

History Notes:

BP-103726--ITEM WAS PLACED ON CHART BETWEEN 1974 AND 1975 FROM TP SHEET 00750.

Survey Summary

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The item was located outside the NALL, and was not investigated.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B310-NewYork-AWOIS	AWOIS # 12536	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the item be retained as charted

S-57 Data

[None]

Office Notes

Concur. Retain as charted.

1.4) AWOIS #12550 - OBSTRUCTION

No Primary Survey Feature for this AWOIS Item

Search Position: 40° 31' 57.8" N, 074° 15' 08.5" W

Historical Depth: [None]

Search Radius: 150

Search Technique: MB,ES,S2,SD,DI,VS

Technique Notes: [None]

History Notes:

SOURCE UNKNOWN-- ITEM APPEARS ON STANDARD IN 1944. NO OTHER INFORMATION COULD BE FOUND. THE AMOUNT OF TIME SPENT TO FURTHER DETERMINE SOURCE WOULD NOT PROVE TO BE BENIFICIAL.

Survey Summary

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The navigable area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES. There was no evidence of an OBSTN in the bathy data. The object is near a oil boom.

Feature Correlation

Address	Feature	Range	Azimuth	Status
OPR-B310-NewYork-AWOIS	AWOIS # 12550	0.00	000.0	Primary
ChartGPs - ENC US5NJ11M	AToN 16	13.59	251.5	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object be removed from the chart and AWOIS 12550 be removed from the database.

S-57 Data

[None]

Office Notes

Concur. Delete charted Obstn area.

1.5) AWOIS 12556

Primary Feature for AWOIS Item #12556

Search Position: 40° 32' 20.4" N, 074° 14' 58.5" W

Historical Depth: [None]

Search Radius: 200

Search Technique: SD,DI,VI

Technique Notes: [None]

History Notes:

HISTORY■ LNM 32/83--8/9/83; TWO BARGES ARE OVERTURNED OUTSIDE THE CHANNEL IN ARTHUR KILL IN APPROXIMATE POSITION 40°32'20"N 74°15'00"W (NAD27), THESE BARGES ARE VISIBLE AT ALL STAGES OF TIDE. US COAST PILOT 2, 1983 EDITION, PAGE 257.

Survey Summary

Survey Position: 40° 32' 20.6" N, 074° 14' 58.4" W

Least Depth: 3.28 m (= 10.75 ft = 1.792 fm = 1 fm 4.75 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.962 m ; **TVU (TPEv)** ±0.241 m

Timestamp: 2007-274.15:32:03.335 (10/01/2007)

Survey Line: h11399 / 3002_mbes / 2007-274 / 363_1528

Profile/Beam: 2146/23

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The navigable area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, the object is a wreck located near AWOIS 12556 a charted wreck PA.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/363_1528	2146/23	0.00	000.0	Primary
OPR-B310-NewYork-AWOIS	AWOIS # 12556	6.79	013.8	Secondary
h11399/3002sss500k/2008-056/sonar_data080225162800	0002	9.10	187.7	Secondary
ChartGPs - ENC US5NJ11M	Danger 11	28.44	255.6	Secondary (grouped)

Hydrographer Recommendations

The hydrogrpaher recommends the object be moved to surveyed position, LD added and "PA" removed.

Cartographically-Rounded Depth (Affected Charts):

11ft (12331_1, 12327_1)

1 ¾fm (12300_1, 13003_1, 14500_1)

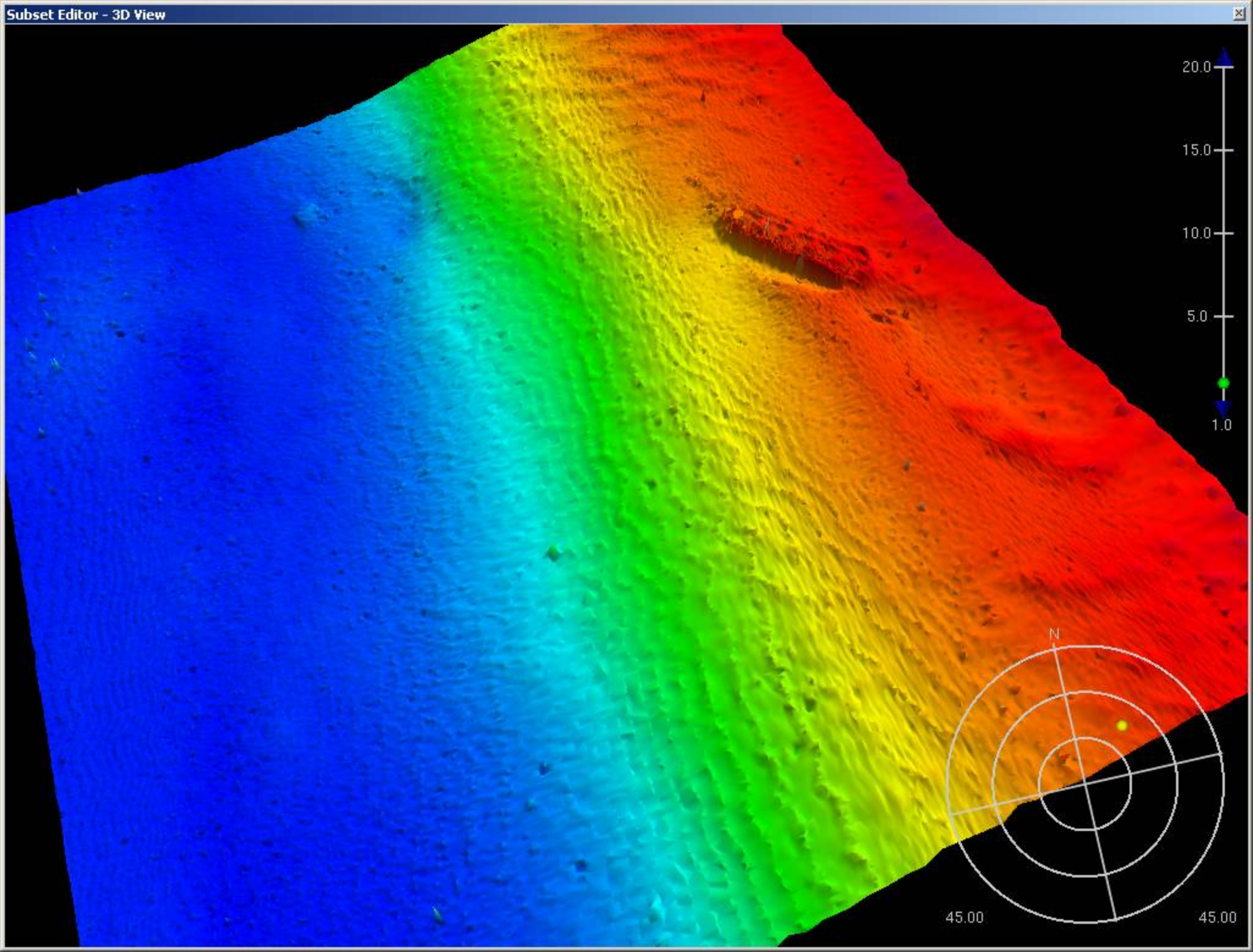
3.3m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 2:dangerous wreck
	SORDAT - 20071001
	TECSOU - 2:found by side scan sonar
	VALSOU - 3.277 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification. Delete charted visible wreck. Chart wreck with a depth of 11 feet in Latitude 40° 32' 20.60" N, 074° 14' 58.43" W Add 11 Wk and danger curve.


Subset Editor - 3D View
20.0
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1.6) AWOIS 12554

Primary Feature for AWOIS Item #12554

Search Position:	40° 32' 12.6" N, 074° 14' 56.7" W
Historical Depth:	[None]
Search Radius:	200
Search Technique:	MB,ES,S2,SD,DI
Technique Notes:	SEARCH NOT REQUIRED IN FEDERAL CHANNEL LIMITS

History Notes:

SOURCE UNKNOWN-- ITEM APPEARS ON STANDARD IN 1928. PA LABEL ADDED IN 1968. NO OTHER INFORMATION COULD BE FOUND. THE AMOUNT OF TIME SPENT TO FURTHER DETERMINE SOURCE WOULD NOT PROVE TO BE BENIFICIAL.

Survey Summary

Survey Position:	40° 32' 15.8" N, 074° 14' 56.8" W
Least Depth:	2.82 m (= 9.25 ft = 1.541 fm = 1 fm 3.25 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.964 m ; **TVU (TPEv)** ±0.260 m
Timestamp:	2007-274.15:30:56.286 (10/01/2007)
Survey Line:	h11399 / 3002_mbes / 2007-274 / 363_1528
Profile/Beam:	1451/124
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The navigable area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object is an exposed wreck located within the search radius of AWOIS 12554. Designated sounding is intended to be used for position only and is not intended to be used for least depth. The Contact is near several other exposed wrecks and a charted wreckage area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/363_1528	1451/124	0.00	000.0	Primary
h11399/3002sss500k/2008-056/sonar_data080225162800	0001	2.47	159.5	Secondary
h11399/3002sss500k/2007-113/sonar_data070423173000	0002	18.70	180.7	Secondary
OPR-B310-NewYork-AWOIS	AWOIS # 12554	98.56	358.7	Secondary (grouped)
ChartGPs - ENC US5NJ11M	Danger 8	98.86	360.0	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object be charted as an exposed wreck.

Cartographically-Rounded Depth (Affected Charts):

9ft (12331_1, 12327_1)

1 ½fm (12300_1, 13003_1, 14500_1)

2.8m (5161_1)

S-57 Data

Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 2:dangerous wreck
	SORDAT - 20071001
	VALSOU - 2.818 m
	WATLEV - 1:partly submerged at high water

Office Notes

Concur with clarification. Delete dangerous sunken wreck, PA. Chart visible wreck in Latitude 40° 32' 15.8" N, Longitude 074° 14' 56.8" W. Add visible wreck.

Feature Images

H11399 - Charted Items

Registry Number: H11399

State: New Jersey

Locality: Raritan Bay

Sub-locality: Entrance to Raritan River Arthur Kill

Project Number: OPR-B310-NRT5-07

Survey Dates: 10/01/2007 - 02/07/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12331	31st	07/01/2005	1:15,000 (12331_1)	USCG LNM: 03/04/2008 (04/15/2008) CHS NTM: None (01/25/2008) NGA NTM: 02/27/1999 (04/26/2008)
12332	22nd	01/01/2006	1:20,000 (12332_1)	USCG LNM: 03/04/2008 (04/15/2008) CHS NTM: None (01/25/2008) NGA NTM: None (04/26/2008)
12327	101st	04/01/2008	1:40,000 (12327_1)	USCG LNM: 04/29/2008 (06/03/2008) NGA NTM: 06/17/2006 (06/07/2008)
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	2149/4 Wrecks	Wreck	3.41 m	40° 31' 36.8" N	074° 14' 45.3" W	---
1.2	5803/4 Dolphin	Dolphin	1.38 m	40° 30' 47.3" N	074° 15' 12.8" W	---
1.3	1385/48	Rock	10.13 m	40° 32' 16.7" N	074° 15' 09.8" W	---
1.4	1921/17 Rocks	Rock	7.03 m	40° 32' 13.6" N	074° 15' 07.1" W	---
1.5	7872/4 Wrecks	Wreck	2.60 m	40° 31' 36.0" N	074° 14' 44.3" W	---
1.6	605/39 OBSTN	Obstruction	10.76 m	40° 30' 32.7" N	074° 15' 35.8" W	---
1.7	3918/102 OBSTN	Obstruction	10.43 m	40° 30' 57.5" N	074° 15' 17.7" W	---

1.8	1646/13 OBSTN	Obstruction	7.47 m	40° 29' 18.7" N	074° 16' 24.0" W	---

1.1) 2149/4 Wrecks

Survey Summary

Survey Position: 40° 31' 36.8" N, 074° 14' 45.3" W

Least Depth: 3.41 m (= 11.18 ft = 1.863 fm = 1 fm 5.18 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.966 m ; **TVU (TPEv)** ±0.291 m

Timestamp: 2007-274.16:16:21.847 (10/01/2007)

Survey Line: h11399 / 3002_mbes / 2007-274 / 449_1613

Profile/Beam: 2149/4

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

Area was surveyed with 100% Simrad EM3000 MBES verified tides appliled. Contacts are portions of the charted "Wks". Designated sounding is intended to be used for position only and is not intended to be used for least depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/449_1613	2149/4	0.00	000.0	Primary
h11399/3002_mbes/2007-274/449_1613	2030/5	22.31	121.7	Secondary (grouped)
ChartGPs - ENC US5NJ11M	Danger 2	43.39	232.4	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object be charted as an exposed wreck.

Cartographically-Rounded Depth (Affected Charts):

11ft (12331_1, 12327_1)

1 ¾fm (12300_1, 13003_1, 14500_1)

3.4m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 2:dangerous wreck

CONVIS - 1:visual conspicuous

SORDAT - 20071001

TECSOU - 3:found by multi-beam

VALSOU - 3.407 m

VERDAT - 12:Mean lower low water

WATLEV - 1:partly submerged at high water

Office Notes

Concur with clarification. Reatin notation Wks. Chart a visible wreck in Latitude 40° 31' 36.8" N, Longitude 074° 14' 45.3" W. Add visible wreck.

1.2) 5803/4 Dolphin

Survey Summary

Survey Position:	40° 30' 47.3" N, 074° 15' 12.8" W
Least Depth:	1.38 m (= 4.54 ft = 0.757 fm = 0 fm 4.54 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.962 m ;**TVU (TPEv)** ±0.247 m
Timestamp:	2007-275.15:37:48.591 (10/02/2007)
Survey Line:	h11399 / 3002_mbes / 2007-275 / 198_1529
Profile/Beam:	5803/4
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is a Dol.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/198_1529	5803/4	0.00	000.0	Primary
ChartGPs - ENC US5NJ12M	AToN 69	8.82	280.3	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object be retained as charted.

Cartographically-Rounded Depth (Affected Charts):

4ft (12331_1, 12332_1, 12327_1)

0 ¾fm (12300_1, 13003_1, 14500_1)

1.4m (5161_1)

S-57 Data

[None]

Office Notes

Concur. Retain dol as charted.

1.3) 1385/48

Survey Summary

Survey Position:	40° 32' 16.7" N, 074° 15' 09.8" W
Least Depth:	10.13 m (= 33.24 ft = 5.540 fm = 5 fm 3.24 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.248 m
Timestamp:	2007-274.14:54:09.581 (10/01/2007)
Survey Line:	h11399 / 3002_mbes / 2007-274 / 417_1451
Profile/Beam:	1385/48
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. Charted rocky area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/417_1451	1385/48	0.00	000.0	Primary

Hydrographer Recommendations

The object is the range of charted depths in the area, the hydrographer recommends the area be retained as charted.

S-57 Data

[None]

Office Notes

Concur with clarification - Area determined to be rky during office processing.

The 21 Rk in 40° 32' 14"N, 074° 15' 08"W has been disproved by side scan and multibeam. Delete the 21Rk.

Chart present survey depths.

1.4) 1921/17 Rocks

Survey Summary

Survey Position:	40° 32' 13.6" N, 074° 15' 07.1" W
Least Depth:	7.03 m (= 23.06 ft = 3.844 fm = 3 fm 5.06 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.253 m
Timestamp:	2007-274.14:31:09.286 (10/01/2007)
Survey Line:	h11399 / 3002_mbes / 2007-274 / 419_1427
Profile/Beam:	1921/17
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. Charted rocky area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/419_1427	1921/17	0.00	000.0	Primary

Hydrographer Recommendations

The object is deeper than charted depths in the area, the hydrographer recommends the area be retained as charted.

S-57 Data

[None]

Office Notes

Concur with clarification - Chart a notation rky in Latitude 40° 32' 14.6" N, Longitude 074° 15' 07.4" W. Delete charted 21 Rk and danger curve.

1.5) 7872/4 Wrecks

Survey Summary

Survey Position:	40° 31' 36.0" N, 074° 14' 44.3" W
Least Depth:	2.60 m (= 8.53 ft = 1.422 fm = 1 fm 2.53 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.259 m
Timestamp:	2007-275.13:51:09.593 (10/02/2007)
Survey Line:	h11399 / 3002_mbes / 2007-275 / 001_1339
Profile/Beam:	7872/4
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

Area was surveyed with 100% Simrad EM3000 MBES verified tides appliled. Contacts are portions of the charted "Wks". Designated sounding is intended to be used for position only and is not intended to be used for least depth.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/001_1339	7872/4	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an exposed wreck.

Cartographically-Rounded Depth (Affected Charts):

8ft (12331_1, 12327_1)

1 ¼fm (12300_1, 13003_1, 14500_1)

2.6m (5161_1)

S-57 Data

[None]

Office Notes

Concur with clarification. Chart a visible wreck in Latitude 40° 31' 36.0" N, Longitude 074° 14' 44.3" W. Add visible wreck.

1.6) 605/39 OBSTN

Survey Summary

Survey Position: 40° 30' 32.7" N, 074° 15' 35.8" W

Least Depth: 10.76 m (= 35.29 ft = 5.881 fm = 5 fm 5.29 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.967 m ; **TVU (TPEv)** ±0.250 m

Timestamp: 2007-275.16:27:22.245 (10/02/2007)

Survey Line: h11399 / 3002_mbes / 2007-275 / 187_1626

Profile/Beam: 605/39

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object appears to be a man made object located within the charted OBSTN circle.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/256_1737	67/18	0.00	000.0	Primary
h11399/3002_mbes/2007-275/187_1626	605/39	2.05	064.0	Secondary
h11399/3002sss500k/2007-114/sonar_data070424165100	0002	11.93	191.5	Secondary

Hydrographer Recommendations

The hydrographer recommends the OBSTN LD be updated to relfect current bathy data.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20071002

TECSOU - 2:found by side scan sonar

VALSOU - 10.755 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Chart an obstruction with a depth of 30 feet in Latitude 40° 30' 32.7" N, Longitude 074° 15' 35.7" W. Delete 29 Obstn and danger curve. Add 30 Obstn and danger curve.

Feature Images

1.7) 3918/102 OBSTN

Survey Summary

Survey Position: 40° 30' 57.5" N, 074° 15' 17.7" W

Least Depth: 10.43 m (= 34.23 ft = 5.704 fm = 5 fm 4.23 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.966 m ; **TVU (TPEv)** ±0.253 m

Timestamp: 2007-275.14:40:43.646 (10/02/2007)

Survey Line: h11399 / 3002_mbes / 2007-275 / 192_1433

Profile/Beam: 3918/102

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object is a small OBSTN located near a charted 29' sounding.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/192_1433	3918/102	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424165100	0003	12.38	214.0	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

34ft (12331_1, 12332_1, 12327_1)

5 ¾fm (12300_1, 13003_1, 14500_1)

10.4m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20071002

TECSOU - 2:found by side scan sonar

VALSOU - 10.432 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Do not concur - Item determined to be insignificant during office processing. Chart present survey depths.

1.8) 1646/13 OBSTN

Survey Summary

Survey Position: 40° 29' 18.7" N, 074° 16' 24.0" W

Least Depth: 7.47 m (= 24.51 ft = 4.086 fm = 4 fm 0.51 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.966 m ; **TVU (TPEv)** ±0.272 m

Timestamp: 2008-038.15:09:03.866 (02/07/2008)

Survey Line: h11399 / 3002_mbes / 2008-038 / 044_1506

Profile/Beam: 1646/13

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN located on charted ruins.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-038/043_1511	1444/112	0.00	000.0	Primary
h11399/3002_mbes/2008-038/044_1506	1646/13	30.72	252.3	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20080207

TECSOU - 3:found by multi-beam

VALSOU - 7.472 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Do not concur - Item determined insignificant during office processing. Do not chart. Chart present survey depths.

H11399 - Uncharted Items

Registry Number: H11399

State: New Jersey

Locality: Raritan Bay

Sub-locality: Entrance to Raritan River Arthur Kill

Project Number: OPR-B310-NRT5-07

Survey Dates: 05/07/2007 - 02/08/2008

Charts Affected

Number	Edition	Date	Scale (RNC)	RNC Correction(s)*
12331	31st	07/01/2005	1:15,000 (12331_1)	USCG LNM: 03/04/2008 (04/15/2008) CHS NTM: None (01/25/2008) NGA NTM: 02/27/1999 (04/26/2008)
12332	22nd	01/01/2006	1:20,000 (12332_1)	USCG LNM: 03/04/2008 (04/15/2008) CHS NTM: None (01/25/2008) NGA NTM: None (04/26/2008)
12327	101st	04/01/2008	1:40,000 (12327_1)	USCG LNM: 04/29/2008 (06/03/2008) NGA NTM: 06/17/2006 (06/07/2008)
12300	45th	03/01/2005	1:400,000 (12300_1)	[L]NTM: ?
5161	13th	10/01/2003	1:1,058,400 (5161_1)	[L]NTM: ?
13003	48th	10/01/2004	1:1,200,000 (13003_1)	[L]NTM: ?
14500	27th	10/01/2002	1:1,500,000 (14500_1)	[L]NTM: ?

* Correction(s) - *source: last correction applied (last correction reviewed--"cleared date")*

Features

No.	Name	Feature Type	Survey Depth	Survey Latitude	Survey Longitude	AWOIS Item
1.1	OBSTN near AWOIS 12554	Shoal	2.94 m	40° 32' 12.2" N	074° 14' 56.1" W	---
1.2	4519/87 OBSTN	Shoal	10.91 m	40° 31' 34.3" N	074° 14' 50.6" W	---
1.3	1249/21 OBSTN	Obstruction	10.05 m	40° 30' 38.8" N	074° 15' 32.6" W	---
1.4	148/93 OBSTN	Shoal	10.89 m	40° 30' 46.2" N	074° 15' 17.1" W	---
1.5	3104/38 Old Buoy Sinker	Shoal	11.46 m	40° 31' 15.4" N	074° 14' 48.8" W	---
1.6	318/72 OBSTN	Shoal	11.66 m	40° 30' 58.5" N	074° 15' 08.1" W	---
1.7	83/36 OBSTN	Shoal	11.37 m	40° 30' 48.9" N	074° 15' 19.8" W	---

1.8	205/59 OBSTN	Shoal	11.88 m	40° 30' 36.2" N	074° 15' 25.9" W	---
1.9	131/82 Debris	Shoal	11.41 m	40° 30' 27.4" N	074° 15' 28.3" W	---
1.10	105/88 OBSTN	Shoal	11.82 m	40° 30' 18.9" N	074° 15' 28.8" W	---
1.11	103/65 OBSTN	Shoal	12.78 m	40° 30' 16.5" N	074° 15' 28.4" W	---
1.12	202/48 OBSTN	Shoal	12.49 m	40° 30' 16.1" N	074° 15' 32.5" W	---
1.13	223/24 OBSTN	Shoal	8.24 m	40° 30' 06.0" N	074° 15' 38.1" W	---
1.14	2243/102 OBSTN in Anchorage	Obstruction	9.89 m	40° 29' 49.2" N	074° 15' 39.3" W	---
1.15	2281/97	Obstruction	9.88 m	40° 29' 49.6" N	074° 15' 39.7" W	---
1.16	3001/122 OBSTN	Obstruction	4.09 m	40° 31' 48.5" N	074° 14' 49.9" W	---
1.17	4364/24 OBSTN	Obstruction	2.99 m	40° 31' 51.3" N	074° 14' 48.2" W	---
1.18	891/12 Wreckage and Ruious Pier	Shoal	4.83 m	40° 30' 33.7" N	074° 15' 37.2" W	---
1.19	1574/69 Pier Ruins	Shoal	7.71 m	40° 30' 38.8" N	074° 15' 33.9" W	---
1.20	423/113 OBSTN	Obstruction	4.47 m	40° 30' 30.0" N	074° 15' 39.0" W	---
1.21	3864/44 OBSTN or Pile	Obstruction	7.23 m	40° 30' 14.9" N	074° 15' 42.2" W	---
1.22	4985/93 OBSTN or Small Wreck	Obstruction	10.07 m	40° 30' 23.5" N	074° 15' 38.2" W	---
1.23	166/22 Debris	Shoal	10.89 m	40° 29' 21.0" N	074° 14' 52.3" W	---
1.24	2958/118 OBSTN	Obstruction	6.38 m	40° 29' 31.6" N	074° 16' 19.7" W	---
1.25	382/50 OBSTN	Shoal	4.79 m	40° 29' 34.4" N	074° 16' 12.5" W	---
1.26	4731/15 Debris near R Buoy "6"	Shoal	3.24 m	40° 29' 40.2" N	074° 16' 04.7" W	---
1.27	2155/101 OBSTN	Shoal	6.33 m	40° 29' 19.8" N	074° 16' 19.1" W	---
1.28	110/107 Wreckage	Wreck	7.48 m	40° 31' 52.4" N	074° 15' 03.8" W	---
1.29	441/91 Wreck	Wreck	5.15 m	40° 29' 41.4" N	074° 16' 50.6" W	---
1.30	3182/45 Debris	Shoal	7.87 m	40° 30' 04.3" N	074° 17' 02.6" W	---
1.31	2304/89 Debris	Shoal	9.30 m	40° 30' 03.5" N	074° 17' 03.5" W	---
1.32	719/121 OBSTN	Shoal	9.24 m	40° 29' 59.4" N	074° 17' 02.8" W	---
1.33	992/79 OBSTN	Shoal	9.04 m	40° 29' 57.0" N	074° 17' 00.9" W	---
1.34	1322/107 OBSTN Near R"6"	Shoal	8.40 m	40° 29' 53.9" N	074° 16' 59.1" W	---
1.35	56/77 OBSTN Sandy Point Reach	Shoal	7.72 m	40° 30' 06.2" N	074° 17' 06.7" W	---
1.36	2140/19 OBSTN	Obstruction	7.19 m	40° 31' 31.9" N	074° 14' 49.0" W	---
1.37	4358/121 OBSTN	Obstruction	4.17 m	40° 31' 46.0" N	074° 14' 49.0" W	---
1.38	67/18	Obstruction	9.27 m	40° 30' 32.7" N	074° 15' 35.7" W	---
1.39	1444/112	Obstruction	3.51 m	40° 29' 18.4" N	074° 16' 25.2" W	---

1.1) OBSTN near AWOIS 12554

Survey Summary

Survey Position:	40° 32' 12.2" N, 074° 14' 56.1" W
Least Depth:	2.94 m (= 9.64 ft = 1.606 fm = 1 fm 3.64 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.963 m ;**TVU (TPEv)** ±0.242 m
Timestamp:	2007-274.15:30:07.211 (10/01/2007)
Survey Line:	h11399 / 3002_mbes / 2007-274 / 363_1528
Profile/Beam:	922/117
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES verified tides appliled, a small OBSTN was noted in the bathy data.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/363_1528	922/117	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the contact be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

9ft (12331_1, 12327_1)

1 ½fm (12300_1, 13003_1, 14500_1)

2.9m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur. Do not chart obstrn. Obstrn determined insignificant during office processing.

1.2) 4519/87 OBSTN

Survey Summary

Survey Position:	40° 31' 34.3" N, 074° 14' 50.6" W
Least Depth:	10.91 m (= 35.81 ft = 5.968 fm = 5 fm 5.81 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ; **TVU (TPEv)** ±0.250 m
Timestamp:	2007-274.16:42:46.989 (10/01/2007)
Survey Line:	h11399 / 3002_mbes / 2007-274 / 365_1634
Profile/Beam:	4519/87
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be debris on the edge of the channel, LD slightly deeper than channel controlling depth (Controlling depth for Outerbridge Reach 35.3 ft. for right outside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/365_1634	4519/87	0.00	000.0	Primary
h11399/3002sss500k/2007-113/sonar_data070423170200	0010	7.21	156.4	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

36ft (12331_1, 12327_1)

6fm (12300_1, 13003_1, 14500_1)

10.9m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur. Item determined insignificant during office processing. Do not chart.

1.3) 1249/21 OBSTN

Survey Summary

Survey Position:	40° 30' 38.8" N, 074° 15' 32.6" W
Least Depth:	10.05 m (= 32.97 ft = 5.495 fm = 5 fm 2.97 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.968 m ; **TVU (TPEv)** ±0.259 m
Timestamp:	2007-275.16:28:34.549 (10/02/2007)
Survey Line:	h11399 / 3002_mbes / 2007-275 / 187_1626
Profile/Beam:	1249/21
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

Area was surveyed with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES verified tides appliled. The object is an samll OBSTN.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/187_1626	1249/21	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

33ft (12331_1, 12332_1, 12327_1)

5 ½fm (12300_1, 13003_1, 14500_1)

10.0m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20071002
	TECSOU - 3:found by multi-beam
	VALSOU - 10.049 m
	VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart Obstrn with a depth of 33 feet in Latitude 40° 30' 38.8" N, Longitude 074° 15' 32.6" W. Add 33 Obstn and danger curve.

1.4) 148/93 OBSTN

Survey Summary

Survey Position:	40° 30' 46.2" N, 074° 15' 17.1" W
Least Depth:	10.89 m (= 35.71 ft = 5.952 fm = 5 fm 5.71 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.966 m ; **TVU (TPEv)** ±0.250 m
Timestamp:	2007-275.14:45:55.032 (10/02/2007)
Survey Line:	h11399 / 3002_mbes / 2007-275 / 195_1445
Profile/Beam:	148/93
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be debris on the edge of the channel LD slightly deeper than channel controlling depth (Controlling depth for Outerbridge Reach 35.3 ft. for right outside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/195_1445	148/93	0.00	000.0	Primary
h11399/3002_mbes/2007-275/195_1543	1965/89	9.82	128.0	Secondary
h11399/3002_mbes/2007-275/195_1543	1984/47	16.39	176.7	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

35ft (12331_1, 12332_1, 12327_1)

6fm (12300_1, 13003_1, 14500_1)

10.9m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur. Item determined insinificant during office processing. Do not chart. Chart present surevy depths.

1.5) 3104/38 Old Buoy Sinker

Survey Summary

Survey Position: 40° 31' 15.4" N, 074° 14' 48.8" W

Least Depth: 11.46 m (= 37.60 ft = 6.267 fm = 6 fm 1.60 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.251 m

Timestamp: 2007-275.14:52:39.725 (10/02/2007)

Survey Line: h11399 / 3002_mbes / 2007-275 / 195_1445

Profile/Beam: 3104/38

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

Area was surveyed with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES verified tides appied. The object appears to be an old buoy sinker, LD deeper than the controlling depth of the channel.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/195_1445	3104/38	0.00	000.0	Primary
h11399/3002sss500k/2007-113/sonar_data070423170200	0012	24.56	216.4	Secondary

Hydrographer Recommendations

The hydrographer recommends no charting action.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.6) 318/72 OBSTN

Survey Summary

Survey Position: 40° 30' 58.5" N, 074° 15' 08.1" W

Least Depth: 11.66 m (= 38.27 ft = 6.378 fm = 6 fm 2.27 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.247 m

Timestamp: 2007-312.18:01:43.048 (11/08/2007)

Survey Line: h11399 / 3002_mbes / 2007-312 / 233_1801

Profile/Beam: 318/72

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be an OBSTN in the channel LD deeper than channel controlling depth (Controlling depth for Outerbridge Reach - 36.1 ft. right inside quarter, 35.3 ft. right outside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/233_1801	318/72	0.00	000.0	Primary
h11399/3002sss500k/2007-113/sonar_data070423170200	0002	7.25	219.4	Secondary
h11399/3002sss500k/2007-114/sonar_data070424135900	0001	14.25	039.7	Secondary

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.7) 83/36 OBSTN

Survey Summary

Survey Position:	40° 30' 48.9" N, 074° 15' 19.8" W
Least Depth:	11.37 m (= 37.30 ft = 6.216 fm = 6 fm 1.30 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.249 m
Timestamp:	2007-312.17:47:01.669 (11/08/2007)
Survey Line:	h11399 / 3002_mbes / 2007-312 / 242_1746
Profile/Beam:	83/36
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be an OBSTN in the channel LD deeper than channel controlling depth (Controlling depth for Outerbridge Reach - 36.1 ft. right inside quarter, 35.1 ft. left inside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/242_1746	83/36	0.00	000.0	Primary
h11399/3002sss500k/2007-113/sonar_data070423161500	0002	10.62	018.1	Secondary (grouped)
h11399/3002sss500k/2007-114/sonar_data070424135900	0003	12.95	021.1	Secondary

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.8) 205/59 OBSTN

Survey Summary

Survey Position:	40° 30' 36.2" N, 074° 15' 25.9" W
Least Depth:	11.88 m (= 38.98 ft = 6.497 fm = 6 fm 2.98 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.247 m
Timestamp:	2007-312.17:41:45.062 (11/08/2007)
Survey Line:	h11399 / 3002_mbes / 2007-312 / 253_1741
Profile/Beam:	205/59
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be debris in the channel LD deeper than channel controlling depth (Controlling depth for Ward Point Bend West - 31.8 ft. right inside quarter, 35.0 ft. left inside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/253_1741	205/59	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424135900	0007	16.76	104.3	Secondary
h11399/3002_mbes/2007-312/251_1740	94/28	23.82	102.8	Secondary
h11399/3002sss500k/2007-113/sonar_data070423170200	0006	23.99	161.6	Secondary

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.9) 131/82 Debris

Survey Summary

Survey Position:	40° 30' 27.4" N, 074° 15' 28.3" W
Least Depth:	11.41 m (= 37.44 ft = 6.240 fm = 6 fm 1.44 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.247 m
Timestamp:	2007-312.17:32:40.185 (11/08/2007)
Survey Line:	h11399 / 3002_mbes / 2007-312 / 261_1732
Profile/Beam:	131/82
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be an OBSTN in the channel LD deeper than channel controlling depth (Controlling depth for Ward Point Bend West - 31.8 ft. right inside quarter, 31.6 ft. right outside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/261_1732	131/82	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424135900	0008	6.45	016.9	Secondary
h11399/3002sss500k/2007-113/sonar_data070423170200	0004	16.79	170.8	Secondary
h11399/3002sss500k/2007-113/sonar_data070423170200	0005	28.69	010.4	Secondary
h11399/3002sss500k/2007-114/sonar_data070424135900	0010	53.09	005.4	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.10) 105/88 OBSTN

Survey Summary

Survey Position:	40° 30' 18.9" N, 074° 15' 28.8" W
Least Depth:	11.82 m (= 38.79 ft = 6.464 fm = 6 fm 2.79 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.249 m
Timestamp:	2007-312.17:21:38.061 (11/08/2007)
Survey Line:	h11399 / 3002_mbes / 2007-312 / 268_1721
Profile/Beam:	105/88
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be an OBSTN in the channel LD deeper than channel controlling depth (Controlling depth for Ward Point Bend West - 31.8 ft. right inside quarter, 35.0 ft. left inside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/268_1721	105/88	0.00	000.0	Primary
h11399/3002sss500k/2007-113/sonar_data070423170200	0001	13.19	238.2	Secondary
h11399/3002sss500k/2007-113/sonar_data070423170200	0003	24.18	075.5	Secondary
h11399/3002sss500k/2007-114/sonar_data070424135900	0004	25.65	308.2	Secondary

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.11) 103/65 OBSTN

Survey Summary

Survey Position:	40° 30' 16.5" N, 074° 15' 28.4" W
Least Depth:	12.78 m (= 41.92 ft = 6.987 fm = 6 fm 5.92 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.248 m
Timestamp:	2007-312.17:16:40.280 (11/08/2007)
Survey Line:	h11399 / 3002_mbes / 2007-312 / 271_1716
Profile/Beam:	103/65
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be an OBSTN in the channel LD (42ft) deeper than channel controlling depth (Controlling depth for Ward Point Bend West - 35.0 ft. left inside quarter, 31.8 ft. right inside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/271_1716	103/65	0.00	000.0	Primary
h11399/3002sss500k/2007-113/sonar_data070423170200	0011	9.62	161.9	Secondary
h11399/3002sss500k/2007-114/sonar_data070424135900	0009	12.42	345.8	Secondary
h11399/3002sss500k/2007-113/sonar_data070423161500	0003	14.34	340.4	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.12) 202/48 OBSTN

Survey Summary

Survey Position:	40° 30' 16.1" N, 074° 15' 32.5" W
Least Depth:	12.49 m (= 40.99 ft = 6.832 fm = 6 fm 4.99 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.249 m
Timestamp:	2007-312.17:14:21.632 (11/08/2007)
Survey Line:	h11399 / 3002_mbes / 2007-312 / 274_1713
Profile/Beam:	202/48
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be an OBSTN, LD deeper than channel controlling depths (Controlling depth for Ward Point Bend West - 35.7 ft. left outside quarter; Raritan River Cutoff - 19.2 ft. right inside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/274_1713	202/48	0.00	000.0	Primary
h11399/3002sss500k/2007-113/sonar_data070423161500	0008	6.51	337.0	Secondary

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.13) 223/24 OBSTN

Survey Summary

Survey Position:	40° 30' 06.0" N, 074° 15' 38.1" W
Least Depth:	8.24 m (= 27.02 ft = 4.504 fm = 4 fm 3.02 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.963 m ;**TVU (TPEv)** ±0.246 m
Timestamp:	2007-312.17:11:25.973 (11/08/2007)
Survey Line:	h11399 / 3002_mbes / 2007-312 / 279_1711
Profile/Beam:	223/24
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact appears to be an OBSTN, LD deeper than channel controlling depths (Controlling depth for Raritan River Cutoff - 19.2 ft. right inside quarter, 20.0 ft. left inside quarter).

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/279_1711	223/24	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424164700	0001	11.46	207.7	Secondary
h11399/3002sss500k/2007-114/sonar_data070424161700	0001	15.94	223.6	Secondary

Hydrographer Recommendations

The hydrographer recommends the object not be charted as an OBSTN.

S-57 Data

[None]

Office Notes

Concur. Do not chart.

1.14) 2243/102 OBSTN in Anchorage

Survey Summary

Survey Position: 40° 29' 49.2" N, 074° 15' 39.3" W

Least Depth: 9.89 m (= 32.46 ft = 5.411 fm = 5 fm 2.46 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.967 m ; **TVU (TPEv)** ±0.250 m

Timestamp: 2007-127.15:12:21.914 (05/07/2007)

Survey Line: h11399 / 3002_mbes / 2007-127 / 005_1507

Profile/Beam: 2243/102

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is a small OBSTN, LD shallower than charted depths in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-127/005_1507	2243/102	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

32ft (12331_1, 12332_1, 12327_1)

5 ¼fm (12300_1, 13003_1, 14500_1)

9.9m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: SORDAT - 20070507

VALSOU - 9.895 m

WATLEV - 3:always under water/submerged

Office Notes

Do not concur - Item determined insignificant during office processing. Do not chart.

1.15) 2281/97

Survey Summary

Survey Position: 40° 29' 49.6" N, 074° 15' 39.7" W

Least Depth: 9.88 m (= 32.42 ft = 5.404 fm = 5 fm 2.42 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.967 m ;**TVU (TPEv)** ±0.250 m

Timestamp: 2007-127.15:12:26.383 (05/07/2007)

Survey Line: h11399 / 3002_mbes / 2007-127 / 005_1507

Profile/Beam: 2281/97

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

Area was surveyed with 100% Simrad EM3000 MBES verified tides appliled. Object is a small obstruction.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-127/005_1507	2281/97	0.00	000.0	Primary

Hydrographer Recommendations

Recommend charting obstruction with LD.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: SORDAT - 20080225

VALSOU - 9.882 m

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart Obstn with a depth of 32 feet in Latitude 40° 29' 49.6" N, Longitude 074° 15' 39.7" W. Add 32 Obstn and danger curve.

1.16) 3001/122 OBSTN

Survey Summary

Survey Position:	40° 31' 48.5" N, 074° 14' 49.9" W
Least Depth:	4.09 m (= 13.42 ft = 2.236 fm = 2 fm 1.42 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.257 m
Timestamp:	2007-274.17:20:31.894 (10/01/2007)
Survey Line:	h11399 / 3002_mbes / 2007-274 / 446_1717
Profile/Beam:	3001/122
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is a small OBSTN located within the search radius of AWOIS 12535.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/446_1717	3001/122	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

13ft (12331_1, 12327_1)

2 ¼fm (12300_1, 13003_1, 14500_1)

4.1m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	SORDAT - 20071001
	VALSOU - 4.090 m
	WATLEV - 3:always under water/submerged

Do not Concur - Item determined insignificant during office processing. Do not chart.

1.17) 4364/24 OBSTN

Survey Summary

Survey Position:	40° 31' 51.3" N, 074° 14' 48.2" W
Least Depth:	2.99 m (= 9.81 ft = 1.634 fm = 1 fm 3.81 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.962 m ; **TVU (TPEv)** ±0.241 m
Timestamp:	2007-274.16:24:24.166 (10/01/2007)
Survey Line:	h11399 / 3002_mbes / 2007-274 / 448_1618
Profile/Beam:	4364/24
Charts Affected:	12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is a small OBSTN located within the search radius of AWOIS 12535.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/448_1618	4364/24	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

10ft (12331_1, 12327_1)

1 ½fm (12300_1, 13003_1, 14500_1)

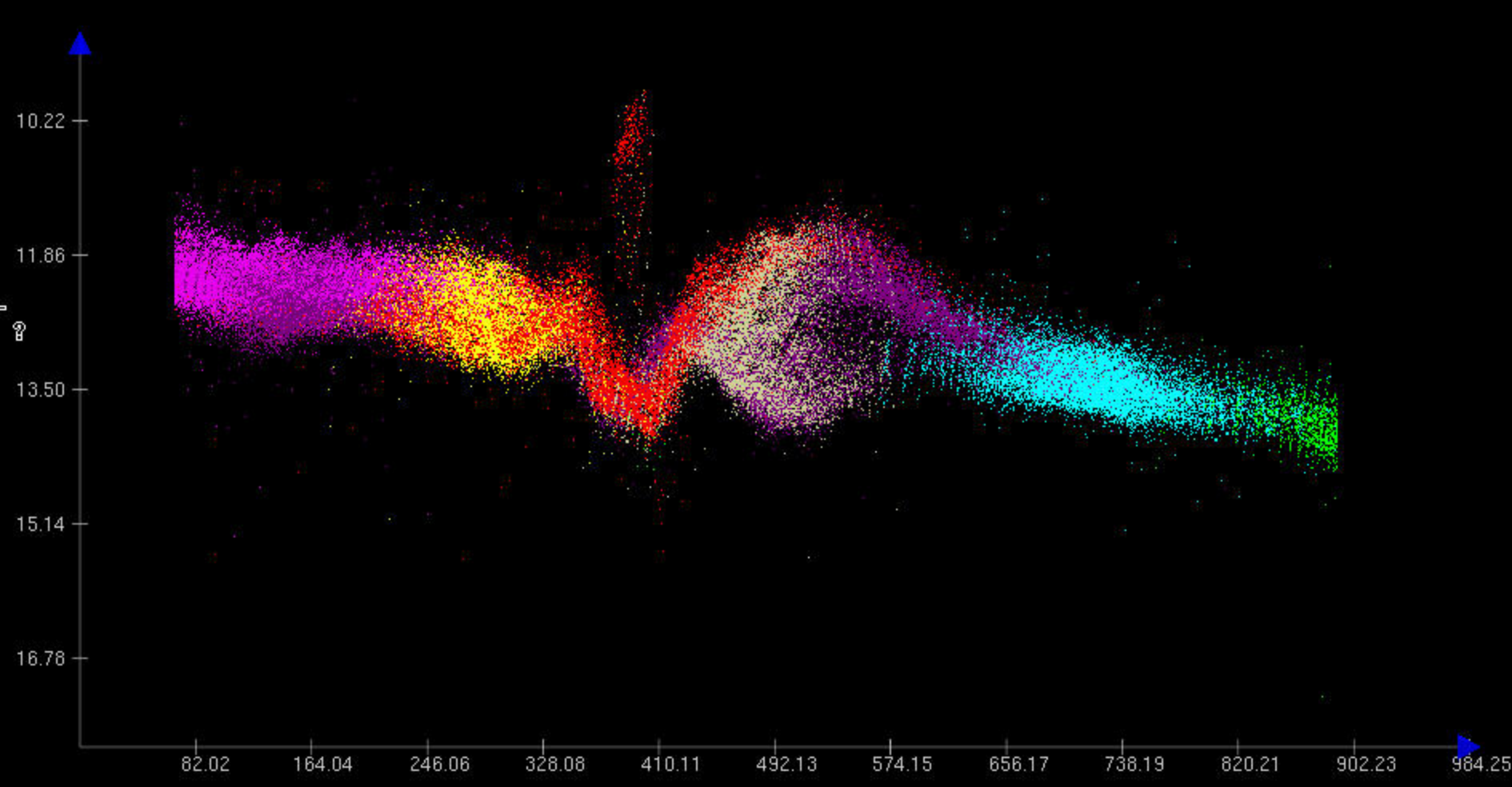
3.0m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	SORDAT - 20071001
	VALSOU - 2.989 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart obstruction with a depth of 10 feet in Latitude 40° 31' 31.7" N, Longitude 074° 14' 48.4" W. Add 10 Obstn and danger curve.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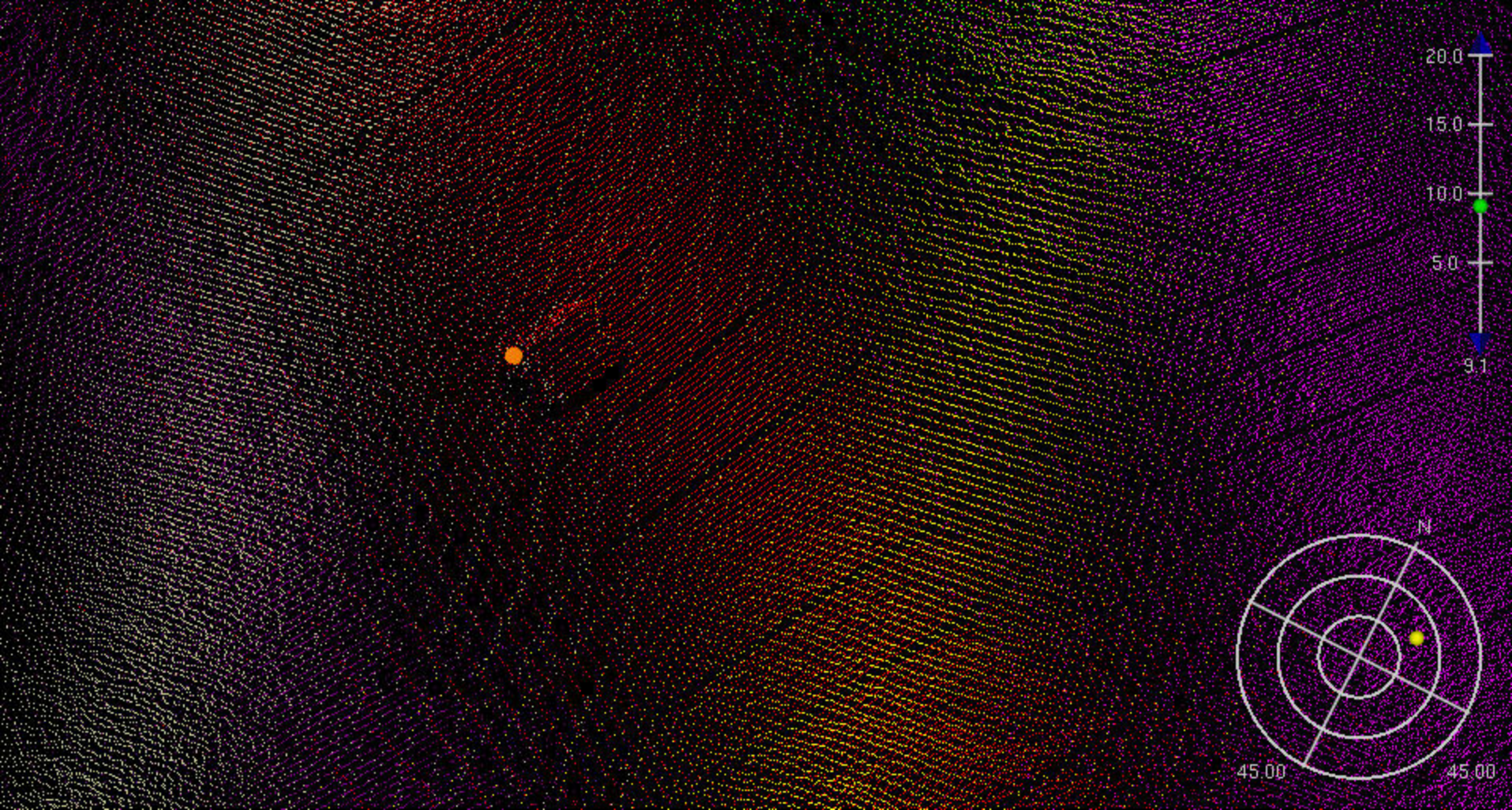
11.86
13.50
15.14
16.78
82.02
164.04
246.06
328.08
410.11
492.13
574.15
656.17
738.19
820.21
902.23
984.25


20.0
15.0
10.0
5.0
9.1
N
45.00
45.00

1.18) 891/12 Wreckage and Ruious Pier

Survey Summary

Survey Position:	40° 30' 33.7" N, 074° 15' 37.2" W
Least Depth:	4.83 m (= 15.85 ft = 2.641 fm = 2 fm 3.85 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.251 m
Timestamp:	2007-275.16:38:12.683 (10/02/2007)
Survey Line:	h11399 / 3002_mbes / 2007-275 / 185_1636
Profile/Beam:	891/12
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. Contact is the end of collapsing shore structure, the charted "L" shaped pier is in a ruinous contition.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/185_1636	891/12	0.00	000.0	Primary
vesselconfig/unassigned/2008-008/h11399_shorelinetgt	3/1	37.36	192.2	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the area be charted as Ruins.

Cartographically-Rounded Depth (Affected Charts):

16ft (12331_1, 12332_1, 12327_1)

2 ½fm (12300_1, 13003_1, 14500_1)

4.8m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur. Defer to MCD for charting recommendation.

1.19) 1574/69 Pier Ruins

Survey Summary

Survey Position: 40° 30' 38.8" N, 074° 15' 33.9" W

Least Depth: 7.71 m (= 25.28 ft = 4.214 fm = 4 fm 1.28 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.964 m ;**TVU (TPEv)** ±0.245 m

Timestamp: 2007-275.16:39:22.190 (10/02/2007)

Survey Line: h11399 / 3002_mbes / 2007-275 / 185_1636

Profile/Beam: 1574/69

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The contact is the easternmost extent of the ruins of the charted pier.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/185_1636	1574/69	0.00	000.0	Primary
h11399/3002_mbes/2007-275/185_1636	1600/6	17.11	156.7	Secondary (grouped)
vesselconfig/unassigned/2008-008/h11399_shorelinetgt	2/1	35.98	123.4	Secondary (grouped)
vesselconfig/unassigned/2008-008/h11399_shorelinetgt	1/1	74.28	170.4	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the area be charted as ruins.

Cartographically-Rounded Depth (Affected Charts):

25ft (12331_1, 12332_1, 12327_1)

4 ¼fm (12300_1, 13003_1, 14500_1)

7.7m (5161_1)

S-57 Data

[None]

OFFICE NOTES

Do not concur. Defer to MCD for charting recommendation.

1.20) 423/113 OBSTN

Survey Summary

Survey Position:	40° 30' 30.0" N, 074° 15' 39.0" W
Least Depth:	4.47 m (= 14.67 ft = 2.445 fm = 2 fm 2.67 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.964 m ; **TVU (TPEv)** ±0.244 m
Timestamp:	2007-275.16:37:26.424 (10/02/2007)
Survey Line:	h11399 / 3002_mbes / 2007-275 / 185_1636
Profile/Beam:	423/113
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES verified tides appliled, the object is a small OBSTN.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-275/185_1636	423/113	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

14ft (12331_1, 12332_1, 12327_1)

2 ½fm (12300_1, 13003_1, 14500_1)

4.5m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	SORDAT - 20071002
	VALSOU - 4.471 m
	WATLEV - 3:always under water/submerged

Office Notes

Concur. Chart 14Ft Obstrn.

1.21) 3864/44 OBSTN or Pile

Survey Summary

Survey Position:	40° 30' 14.9" N, 074° 15' 42.2" W
Least Depth:	7.23 m (= 23.72 ft = 3.954 fm = 3 fm 5.72 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.963 m ; **TVU (TPEv)** ±0.244 m
Timestamp:	2007-290.14:05:47.608 (10/17/2007)
Survey Line:	h11399 / 3002_mbes / 2007-290 / 171_1400
Profile/Beam:	3864/44
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object appears to be a submerged pile.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-290/171_1400	3864/44	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

23ft (12331_1, 12332_1, 12327_1)

4fm (12300_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

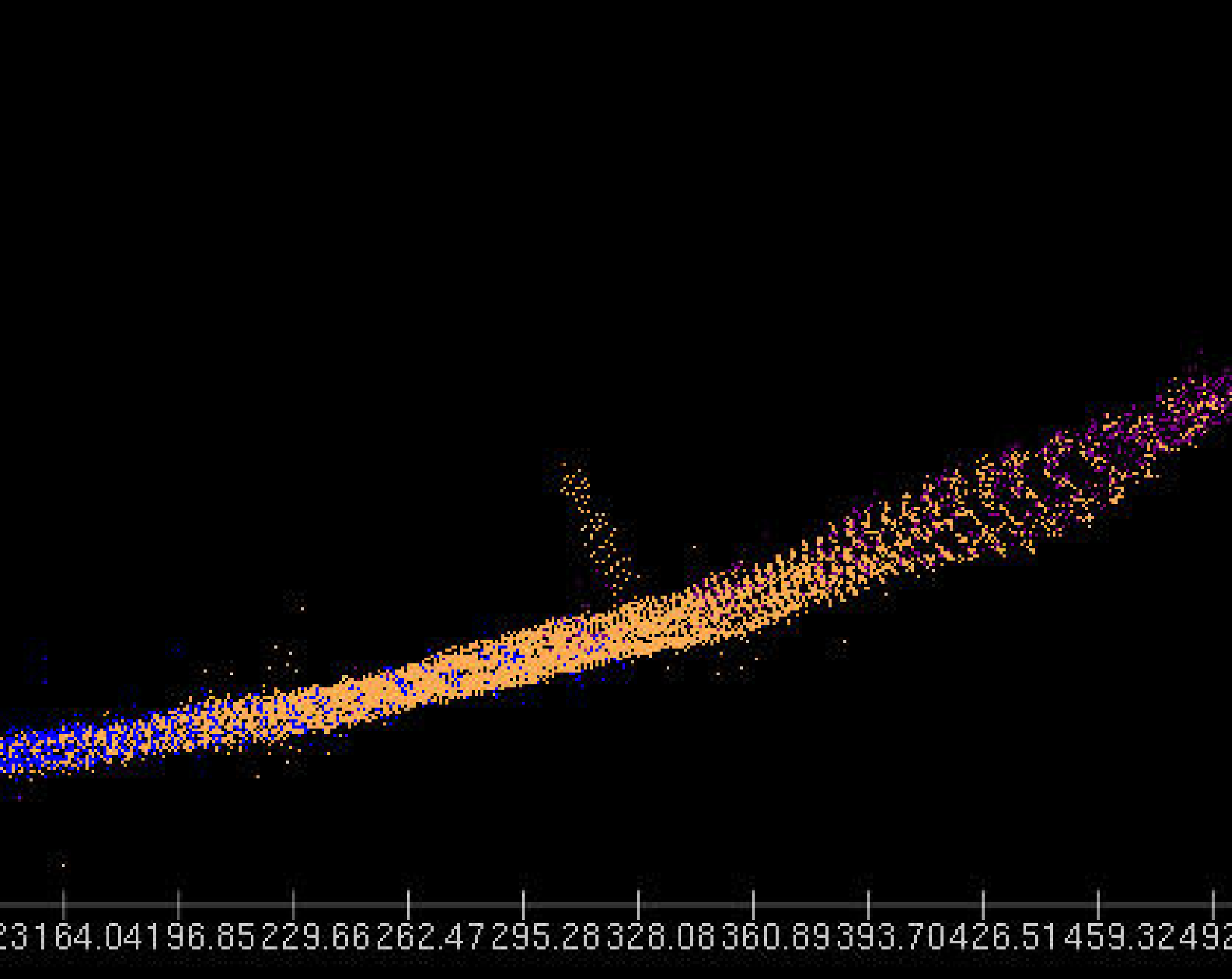
Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20071017
	TECSOU - 3:found by multi-beam
	VALSOU - 7.231 m
	VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart Obstn with a depth of 23 feet in Latitude 40° 30'14.9" N, Longitude 074° 15'42.2" W. Add 23 Obstn and danger curve.

Feature Images


131
164.04
196.85
229.66
262.47
295.28
328.08
360.89
393.70
426.51
459.32
492

1.22) 4985/93 OBSTN or Small Wreck

Survey Summary

Survey Position:	40° 30' 23.5" N, 074° 15' 38.2" W
Least Depth:	10.07 m (= 33.02 ft = 5.504 fm = 5 fm 3.02 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ; **TVU (TPEv)** ±0.248 m
Timestamp:	2007-290.14:07:35.765 (10/17/2007)
Survey Line:	h11399 / 3002_mbes / 2007-290 / 171_1400
Profile/Beam:	4985/93
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN or small wreck.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-290/171_1400	4985/93	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

33ft (12331_1, 12332_1, 12327_1)

5 ½fm (12300_1, 13003_1, 14500_1)

10.1m (5161_1)

S-57 Data

Geo object 1:	Obstruction (OBSTRN)
Attributes:	QUASOU - 6:least depth known
	SORDAT - 20071017
	VALSOU - 10.066 m
	VERDAT - 12:Mean lower low water
	WATLEV - 3:always under water/submerged

Office Notes

Do not concur - Item determined insignificant during office processing. Do not chart.

1.23) 166/22 Debris

Survey Summary

Survey Position:	40° 29' 21.0" N, 074° 14' 52.3" W
Least Depth:	10.89 m (= 35.74 ft = 5.956 fm = 5 fm 5.74 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.968 m ;**TVU (TPEv)** ±0.273 m
Timestamp:	2008-015.16:02:11.281 (01/15/2008)
Survey Line:	h11399 / 3002_mbes / 2008-015 / 192_1602
Profile/Beam:	166/22
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. Debris or Possible old buoy sinker.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-015/192_1602	166/22	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424143800	0001	12.64	165.2	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN - LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

35ft (12331_1, 12332_1, 12327_1)

6fm (12300_1, 13003_1, 14500_1)

10.9m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur - Item is deeper than tabulated depths. Chart present survey depths.

1.24) 2958/118 OBSTN

Survey Summary

Survey Position: 40° 29' 31.6" N, 074° 16' 19.7" W

Least Depth: 6.38 m (= 20.92 ft = 3.487 fm = 3 fm 2.92 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.967 m ; **TVU (TPEv)** ±0.265 m

Timestamp: 2008-022.14:58:30.490 (01/22/2008)

Survey Line: h11399 / 3002_mbes / 2008-022 / 014_1454

Profile/Beam: 2958/118

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-022/014_1454	2958/118	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424163000	0003	6.66	052.1	Secondary

Hydrographer Recommendations

The hydrographer recommneds the object be charted as an OBSTN LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

21ft (12331_1, 12332_1, 12327_1)

3 ½fm (12300_1, 13003_1, 14500_1)

6.4m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20080122

TECSOU - 2:found by side scan sonar

VALSOU - 6.377 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart Obstn with a depth of 21 feet in Latitude 40°29'31.6" N, Longitude 074°16'19.7" W. Add 21 Obstn and danger curve.

1.25) 382/50 OBSTN

Survey Summary

Survey Position:	40° 29' 34.4" N, 074° 16' 12.5" W
Least Depth:	4.79 m (= 15.73 ft = 2.622 fm = 2 fm 3.73 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.962 m ;**TVU (TPEv)** ±0.258 m
Timestamp:	2008-022.14:13:00.343 (01/22/2008)
Survey Line:	h11399 / 3002_mbes / 2008-022 / 186_1412
Profile/Beam:	382/50
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object appears to be debris located outside the channel.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-022/186_1412	382/50	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424163000	0002	4.86	053.8	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

15ft (12331_1, 12332_1, 12327_1)

2 ½fm (12300_1, 13003_1, 14500_1)

4.8m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur - Item determined insignificant during office processing. Chart present survey depths.

1.26) 4731/15 Debris near R Buoy "6"

Survey Summary

Survey Position: 40° 29' 40.2" N, 074° 16' 04.7" W

Least Depth: 3.24 m (= 10.64 ft = 1.773 fm = 1 fm 4.64 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.963 m ;**TVU (TPEv)** ±0.257 m

Timestamp: 2008-022.14:09:37.667 (01/22/2008)

Survey Line: h11399 / 3002_mbes / 2008-022 / 187_1403

Profile/Beam: 4731/15

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object appears to be debris.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-022/187_1403	4731/15	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424163000	0001	9.36	028.4	Secondary

Hydrographer Recommendations

The hydrographer recommends no charting action.

S-57 Data

[None]

Office Notes

Concur

1.27) 2155/101 OBSTN

Survey Summary

Survey Position:	40° 29' 19.8" N, 074° 16' 19.1" W
Least Depth:	6.33 m (= 20.75 ft = 3.459 fm = 3 fm 2.75 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.964 m ;**TVU (TPEv)** ±0.260 m
Timestamp:	2008-038.15:09:50.705 (02/07/2008)
Survey Line:	h11399 / 3002_mbes / 2008-038 / 044_1506
Profile/Beam:	2155/101
Charts Affected:	12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-038/044_1506	2155/101	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

21ft (12331_1, 12332_1, 12327_1)

3 ½fm (12300_1, 13003_1, 14500_1)

6.3m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur - Item determined insignificant during office processing. Do not chart. Shoaler depths in vicinity of item. Chart present survey depths.

1.28) 110/107 Wreckage

Survey Summary

Survey Position: 40° 31' 52.4" N, 074° 15' 03.8" W

Least Depth: 7.48 m (= 24.53 ft = 4.088 fm = 4 fm 0.53 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.964 m ; **TVU (TPEv)** ±0.262 m

Timestamp: 2008-038.17:14:13.464 (02/07/2008)

Survey Line: h11399 / 3002_mbes / 2008-038 / 100_1714

Profile/Beam: 110/107

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object appears to be the remnants of wreck, no significant relief.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-038/100_1714	110/107	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424165100	0006	8.18	198.0	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as a non-dangerous wreck symbol, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

24ft (12331_1, 12327_1)

4fm (12300_1, 13003_1, 14500_1)

7.5m (5161_1)

S-57 Data

Geo object 1: Wreck (WRECKS)

Attributes: CATWRK - 1:non-dangerous wreck

CONVIS - 2:not visual conspicuous

SORDAT - 20080207

TECSOU - 2:found by side scan sonar

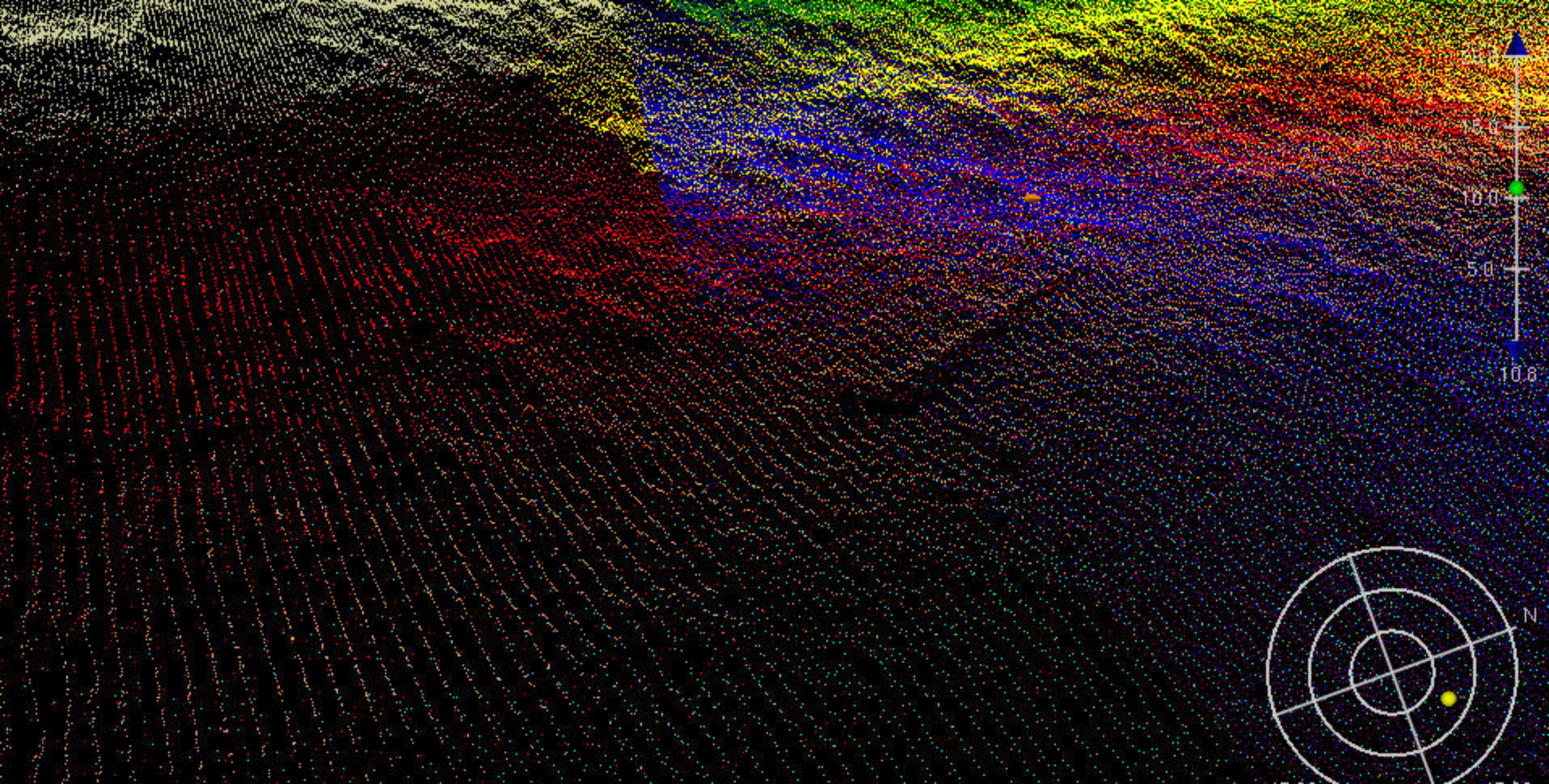
VALSOU - 7.476 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Chart a wreck with a depth of 24 feet in Latitude 40°31'52.4" N, Longitude 074°15'03.8"W. Add 24 Wk and danger curve.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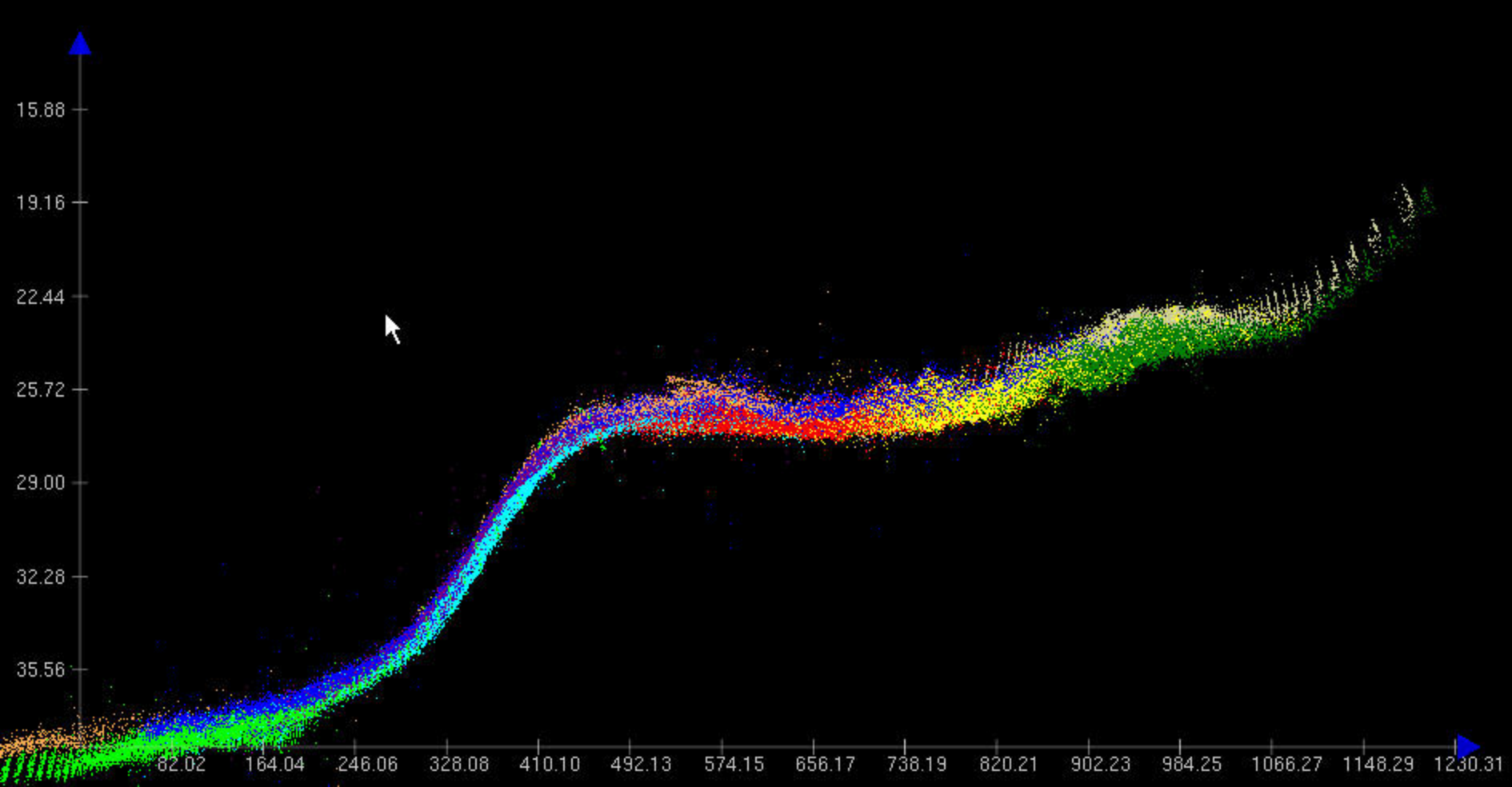
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22.44
25.72
29.00
32.28
35.56
82.02
164.04
246.06
328.08
410.10
492.13
574.15
656.17
738.19
820.21
902.23
984.25
1066.27
1148.29
1230.31

1.29) 441/91 Wreck

Survey Summary

Survey Position:	40° 29' 41.4" N, 074° 16' 50.6" W
Least Depth:	5.15 m (= 16.91 ft = 2.818 fm = 2 fm 4.91 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.962 m ; **TVU (TPEv)** ±0.258 m
Timestamp:	2008-038.15:45:47.065 (02/07/2008)
Survey Line:	h11399 / 3002_mbes / 2008-038 / 169a1545
Profile/Beam:	441/91
Charts Affected:	12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is a wreck, LD in agreement with charted depths in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-038/169a1545	441/91	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object be charted as a non-dangerous wreck, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

17ft (12332_1, 12327_1)

2 ¾fm (12300_1, 13003_1, 14500_1)

5.2m (5161_1)

S-57 Data

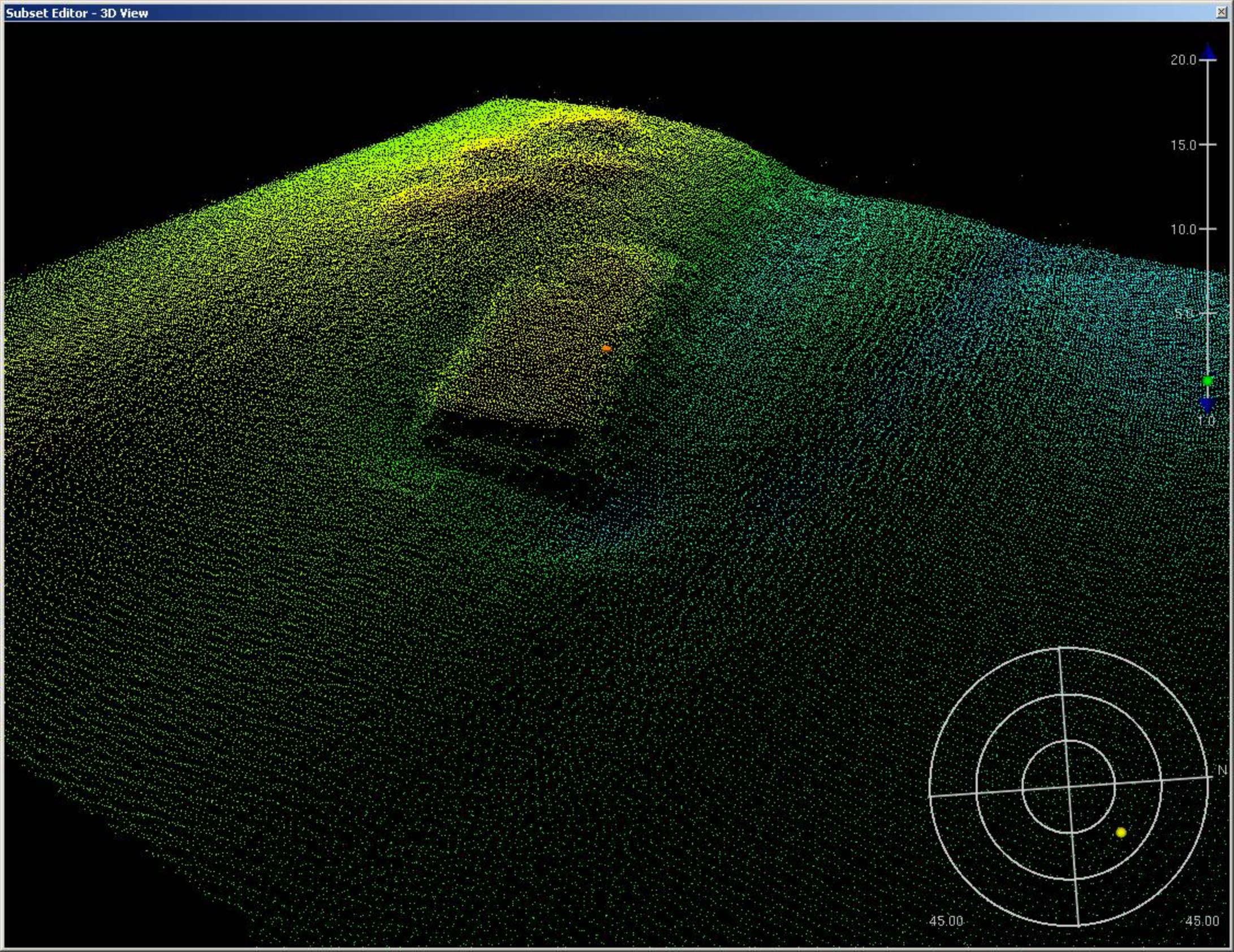
Geo object 1:	Wreck (WRECKS)
Attributes:	CATWRK - 1:non-dangerous wreck
	CONVIS - 2:not visual conspicuous
	SORDAT - 20080207
	TECSOU - 3:found by multi-beam
	VALSOU - 5.153 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - Chart a wreck with a depth of 17 feet in Latitude 40°29'41.4" N, Longitude 074°16'50.6"W. Add 17 Wk and danger curve.


Subset Editor - 3D View
20.0
15.0
10.0
5.0
1.0
N
45.00
45.00

1.30) 3182/45 Debris

Survey Summary

Survey Position:	40° 30' 04.3" N, 074° 17' 02.6" W
Least Depth:	7.87 m (= 25.83 ft = 4.304 fm = 4 fm 1.83 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.963 m ;**TVU (TPEv)** ±0.261 m
Timestamp:	2008-039.15:27:05.919 (02/08/2008)
Survey Line:	h11399 / 3002_mbes / 2008-039 / 024_1522
Profile/Beam:	3182/45
Charts Affected:	12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object appears to be debris LD deeper than charted depths in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-039/024_1522	3182/45	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends no charting action.

S-57 Data

[None]

Office Notes

Concur with clarification - Shoaler item in vicinity. Do not chart.

1.31) 2304/89 Debris

Survey Summary

Survey Position:	40° 30' 03.5" N, 074° 17' 03.5" W
Least Depth:	9.30 m (= 30.52 ft = 5.087 fm = 5 fm 0.52 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.964 m ;**TVU (TPEv)** ±0.263 m
Timestamp:	2008-039.15:17:10.049 (02/08/2008)
Survey Line:	h11399 / 3002_mbes / 2008-039 / 026_1512
Profile/Beam:	2304/89
Charts Affected:	12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object which appears to be debris or a sand wave LD deeper than charted depth in the area.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-039/026_1512	2304/89	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424150100	0015	6.09	140.0	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommnends no charting action

S-57 Data

[None]

Office Notes

Concur with clarification - Shoaler item in vicinity. Do not chart.

1.32) 719/121 OBSTN

Survey Summary

Survey Position:	40° 29' 59.4" N, 074° 17' 02.8" W
Least Depth:	9.24 m (= 30.31 ft = 5.052 fm = 5 fm 0.31 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.971 m ;**TVU (TPEv)** ±0.295 m
Timestamp:	2008-039.15:10:40.009 (02/08/2008)
Survey Line:	h11399 / 3002_mbes / 2008-039 / 027_1509
Profile/Beam:	719/121
Charts Affected:	12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN, LD deeper than the controlling depth of the channel (Sandy Point Reach Right outside quarter = 21.5')

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-039/027_1509	719/121	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object not be chated as an OBSTN.

S-57 Data

[None]

Office Notes

Concur with clarification - Deeper than tabulated depths. Do not chart.

1.33) 992/79 OBSTN

Survey Summary

Survey Position:	40° 29' 57.0" N, 074° 17' 00.9" W
Least Depth:	9.04 m (= 29.66 ft = 4.943 fm = 4 fm 5.66 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.966 m ;**TVU (TPEv)** ±0.262 m
Timestamp:	2008-039.15:11:06.399 (02/08/2008)
Survey Line:	h11399 / 3002_mbes / 2008-039 / 027_1509
Profile/Beam:	992/79
Charts Affected:	12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN, LD deeper than the controlling depth of the channel (Sandy Point Reach Right outside quarter = 21.5')

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-039/027_1509	992/79	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424150100	0014	8.84	144.2	Secondary (grouped)

Hydrographer Recommendations

The hydrographer recommends the object not be chated as an OBSTN.

S-57 Data

[None]

Office Notes

Concur with clarification - Deeper than tabulated depths. Do not chart.

1.34) 1322/107 OBSTN Near R"6"

Survey Summary

Survey Position:	40° 29' 53.9" N, 074° 16' 59.1" W
Least Depth:	8.40 m (= 27.55 ft = 4.592 fm = 4 fm 3.55 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.967 m ;**TVU (TPEv)** ±0.266 m
Timestamp:	2008-039.15:11:37.918 (02/08/2008)
Survey Line:	h11399 / 3002_mbes / 2008-039 / 027_1509
Profile/Beam:	1322/107
Charts Affected:	12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN, LD deeper than the controlling depth of the channel (Sandy Point Reach Right outside quarter = 21.5')

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-039/027_1509	1322/107	0.00	000.0	Primary

Hydrographer Recommendations

The hydrographer recommends the object not be chated as an OBSTN.

S-57 Data

[None]

Office Notes

Concur with clarification - Deeper than tabulated depths. Do not chart. Chart present survey depths.

1.35) 56/77 OBSTN Sandy Point Reach

Survey Summary

Survey Position:	40° 30' 06.2" N, 074° 17' 06.7" W
Least Depth:	7.72 m (= 25.33 ft = 4.222 fm = 4 fm 1.33 ft)
TPU (±1.96σ):	**THU (TPEh)** ±1.965 m ; **TVU (TPEv)** ±0.261 m
Timestamp:	2008-039.16:01:18.261 (02/08/2008)
Survey Line:	h11399 / 3002_mbes / 2008-039 / 050_1601
Profile/Beam:	56/77
Charts Affected:	12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN, LD deeper than the controlling depth of the channel (Sandy Point Reach Left Inside Quarter = 23.6' Right Inside Quarter = 24.2').

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-039/050_1601	56/77	0.00	000.0	Primary
h11399/3002sss500k/2007-114/sonar_data070424150100	0003	6.28	174.4	Secondary
h11399/3002sss500k/2007-114/sonar_data070424152600	0001	10.72	323.6	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be chated as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

25ft (12332_1, 12327_1)

4 ¼fm (12300_1, 13003_1, 14500_1)

7.7m (5161_1)

S-57 Data

[None]

Office Notes

Do not concur - Shoaler item in vicinity. Do not chart.

1.36) 2140/19 OBSTN

Survey Summary

Survey Position: 40° 31' 31.9" N, 074° 14' 49.0" W

Least Depth: 7.19 m (= 23.60 ft = 3.933 fm = 3 fm 5.60 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.965 m ; **TVU (TPEv)** ±0.251 m

Timestamp: 2007-274.16:52:22.540 (10/01/2007)

Survey Line: h11399 / 3002_mbes / 2007-274 / 443_1648

Profile/Beam: 2140/19

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 200% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/443_1648	2140/19	0.00	000.0	Primary
h11399/3002sss500k/2008-056/sonar_data080225162800	0003	9.04	154.2	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

23ft (12331_1, 12327_1)

3 ¾fm (12300_1, 13003_1, 14500_1)

7.2m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20071001

TECSOU - 2:found by side scan sonar

VALSOU - 7.193 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Concur - Chart Obstn with a depth of 23 feet in Latitude 40°31'31.9" N, Longitude 074°14'48.9" W. Add 23 Obstn and danger curve.

1.37) 4358/121 OBSTN

Survey Summary

Survey Position: 40° 31' 46.0" N, 074° 14' 49.0" W

Least Depth: 4.17 m (= 13.67 ft = 2.278 fm = 2 fm 1.67 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.964 m ; **TVU (TPEv)** ±0.253 m

Timestamp: 2007-274.17:15:05.401 (10/01/2007)

Survey Line: h11399 / 3002_mbes / 2007-274 / 445_1708

Profile/Beam: 4358/121

Charts Affected: 12331_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES verified tides applied. The object is an OBSTN located within the search radius of AWOIS 12535.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-274/445_1708	4358/121	0.00	000.0	Primary
h11399/3002_mbes/2007-274/446_1717	3493/43	15.96	275.0	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

Cartographically-Rounded Depth (Affected Charts):

13ft (12331_1, 12327_1)

2 ¼fm (12300_1, 13003_1, 14500_1)

4.2m (5161_1)

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: QUASOU - 6:least depth known

SORDAT - 20071001

TECSOU - 3:found by multi-beam

VALSOU - 4.166 m

VERDAT - 12:Mean lower low water

WATLEV - 3:always under water/submerged

Office Notes

Do not concur - Determined insignificant during office processing. Shoaler depths in vicinity. Do not chart.

1.38) 67/18

Survey Summary

Survey Position: 40° 30' 32.7" N, 074° 15' 35.7" W

Least Depth: 9.27 m (= 30.42 ft = 5.070 fm = 5 fm 0.42 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.965 m ;**TVU (TPEv)** ±0.253 m

Timestamp: 2007-312.17:37:18.537 (11/08/2007)

Survey Line: h11399 / 3002_mbes / 2007-312 / 256_1737

Profile/Beam: 67/18

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Klein 3000 SSS and 100% Simrad EM3000 MBES, verified tides applied. The object appears to be a man made object located within the charted OBSTN circle.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2007-312/256_1737	67/18	0.00	000.0	Primary
h11399/3002_mbes/2007-275/187_1626	605/39	2.05	064.0	Secondary
h11399/3002sss500k/2007-114/sonar_data070424165100	0002	11.93	191.5	Secondary

Hydrographer Recommendations

The hydrographer recommends the OBSTN LD be updated to relfect current bathy data.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: SORDAT - 20080225

VALSOU - 9.272 m

WATLEV - 3:always under water/submerged

Office Notes

Concur with clarification - See section Appendix 2, Charted #1.6 for final charting recommendation.

1.39) 1444/112

Survey Summary

Survey Position: 40° 29' 18.4" N, 074° 16' 25.2" W

Least Depth: 3.51 m (= 11.51 ft = 1.918 fm = 1 fm 5.51 ft)

TPU (±1.96σ): **THU (TPEh)** ±1.962 m ;**TVU (TPEv)** ±0.257 m

Timestamp: 2008-038.15:13:19.197 (02/07/2008)

Survey Line: h11399 / 3002_mbes / 2008-038 / 043_1511

Profile/Beam: 1444/112

Charts Affected: 12331_1, 12332_1, 12327_1, 12300_1, 5161_1, 13003_1, 14500_1

Remarks:

The area was covered with 100% Simrad EM3000 MBES, verified tides applied. The object is an OBSTN located on charted ruins.

Feature Correlation

Address	Feature	Range	Azimuth	Status
h11399/3002_mbes/2008-038/043_1511	1444/112	0.00	000.0	Primary
h11399/3002_mbes/2008-038/044_1506	1646/13	30.72	252.3	Secondary

Hydrographer Recommendations

The hydrographer recommends the object be charted as an OBSTN, LD and position as surveyed.

S-57 Data

Geo object 1: Obstruction (OBSTRN)

Attributes: SORDAT - 20080225

VALSOU - 3.508 m

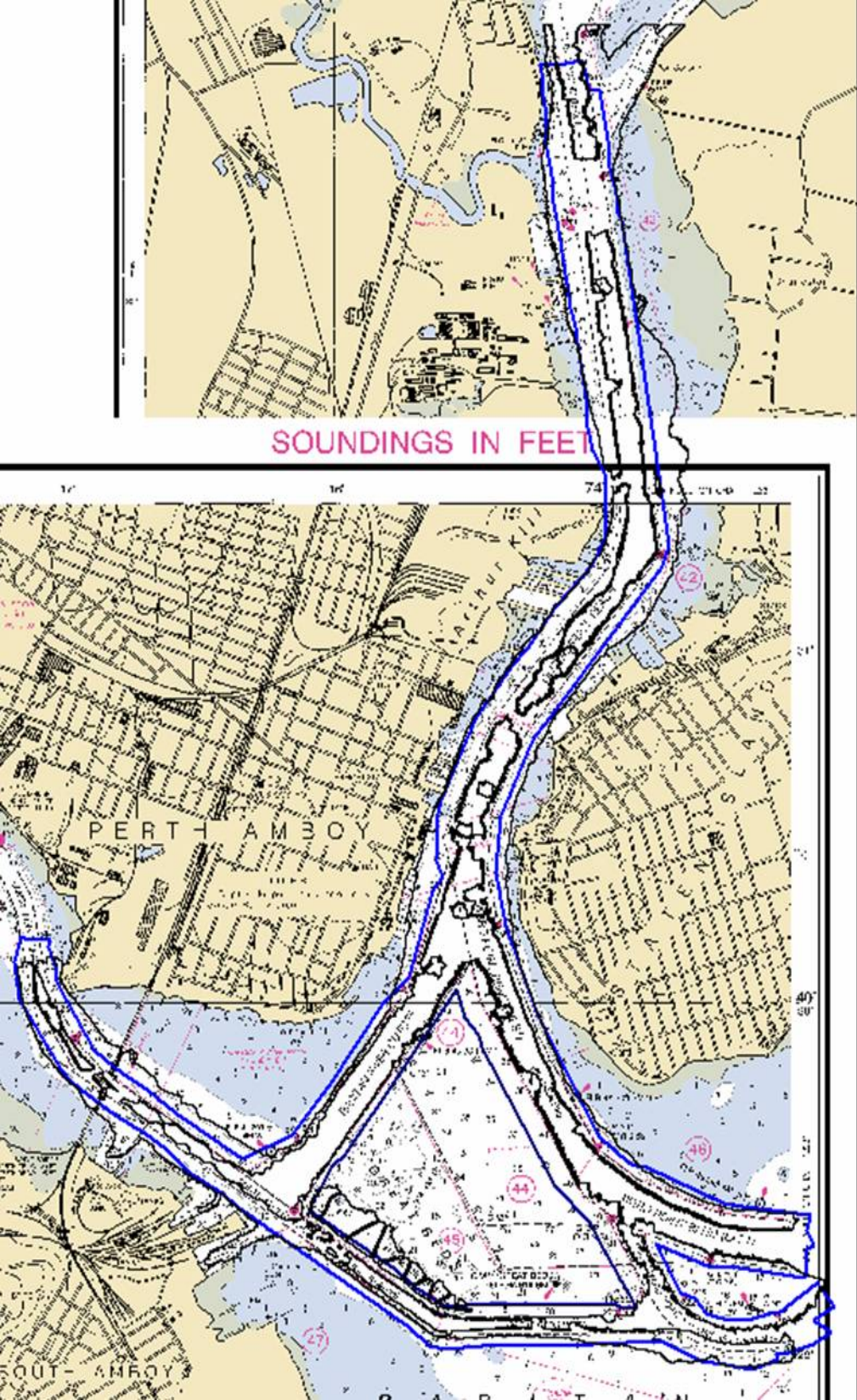
WATLEV - 3:always under water/submerged

Office Notes

Do not concur - Item determined insiginificant during office processing. See Appendix 2, Charted #1.8 for final charting recommendation.

APPENDIX III

PROGRESS SKETCH


SOUNDINGS IN FEET
PERTH AMBOY

APPENDIX IV

TIDES AND WATER LEVELS

UNITED STATES DEPARMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Ocean Service
Silver Spring, Maryland 20910

TIDE NOTE FOR HYDROGRAPHIC SURVEY

DATE : April 17, 2008

HYDROGRAPHIC BRANCH: Atlantic
HYDROGRAPHIC PROJECT: OPR-B310-NRT5-2007
HYDROGRAPHIC SHEET: H11399

LOCALITY: Entrance to Raritan River & Arthur Kill, NJ
TIME PERIOD: April 23 - November 8, 2007
January 8 - February 25, 2008

TIDE STATION USED: 851-9483 Bergen Point, NY
Lat. 40° 38.2'N Long. 074° 8.5' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.582 meters

TIDE STATION USED: 853-1680 Sandy Hook, NJ
Lat. 40° 28.0' N Long. 074° 00.6' W
PLANE OF REFERENCE (MEAN LOWER LOW WATER): 0.000 meters
HEIGHT OF HIGH WATER ABOVE PLANE OF REFERENCE: 1.492 meters

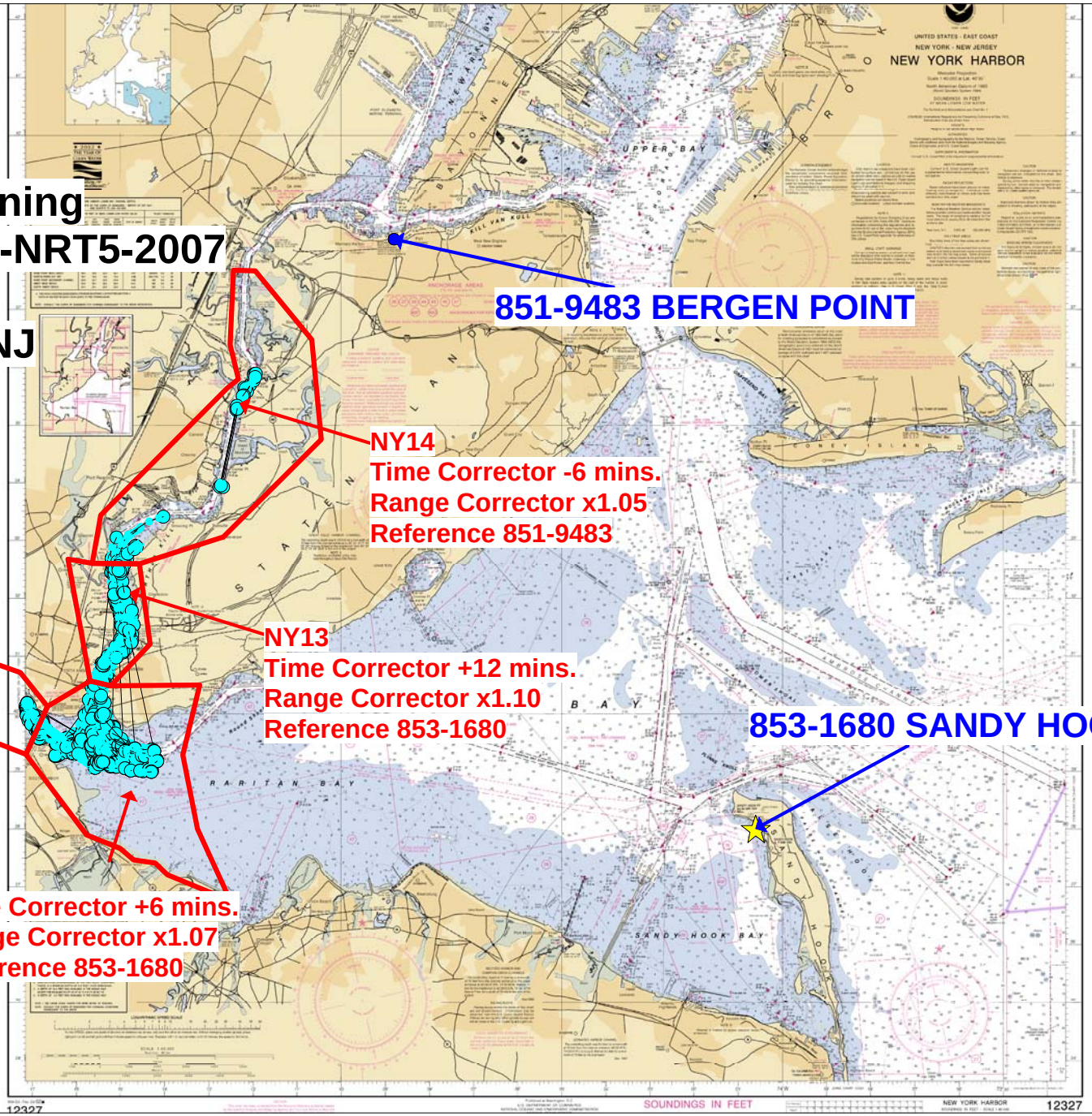
REMARKS: RECOMMENDED ZONING
Use zone(s) identified as: NY9, NY10, NY13, & NY14

Refer to attachments for zoning information.

Note 1: Provided time series data are tabulated in metric units (meters), relative to MLLW and on Greenwich Mean Time on the 1983-2001 National Tidal Datum Epoch (NTDE).

_____
CHIEF, PRODUCTS AND SERVICES DIVISION

Final Tidal Zoning for OPR-B310-NRT5-2007 H11399 Raritan Bay, NJ



851-9483 BERGEN POINT

NY14
Time Corrector -6 mins.
Range Corrector x1.05
Reference 851-9483

NY10
Time Corrector +12 mins.
Range Corrector x1.10
Reference 853-1680

NY13
Time Corrector +12 mins.
Range Corrector x1.10
Reference 853-1680

853-1680 SANDY HOOK

NY9
Time Corrector +6 mins.
Range Corrector x1.07
Reference 853-1680

APPENDIX V
SUPPLEMENTAL SURVEY RECORDS AND CORRESPONDENCES

V.1. COAST PILOT REPORT, NOAA FORM 77-6

No corrections or additions required.

V.2. BOTTOM SAMPLE, NOAA FORM 75-44

No bottom samples were taken.

V.3. AIDS TO NAVIGATION, NOAA FORM 76-40

All AToNs on the sheet were found to be agreement with their corresponding charted locations. No AToNs positioned during this survey were off station by greater than 50 meters.

H11399 COMPILATION LOG

General Survey Information	
REGISTRY No.	*H11399*
PROJECT No.	*OPR-B310-NRT5-07*
FIELD UNIT	*NRT5*
DATE OF SURVEY	*04/23/07 – 02/25/208*
LARGEST SCALE CHART	*12331, edition #31, 20050701*
ADDITIONAL CHARTS	*12327, edition #101, 20080401*
SOUNDING UNITS	*feet*

Source Grids	File Name
	H11399_VBES_BASE_5M_FINAL.hns
	H1399_SHOAL_EXTRACT.hns
	H11399_MBES_CUBE_75cm_FINAL.hns
Surfaces	**File Name**
Combined	*H11399_Combined_5m.hns*
Final HOBs	**File Name**
Survey Scale Soundings	*H11399_SS_Soundings.hob*
Chart Scale Soundings	*H11399_CS_Soundings.hob*
Contour Layer	*H11399_Contours.hob*
Feature Layer	*H11399_Features.hob*
Meta-Objects Layer	*H11399_Meta.hob*
Blue Notes	*H11399_BlueNotes.hob*
ENC Retain Soundings	*H11399_ENC_Retain.hob*

Meta-Objects Attribution	
Acronym	**Value**
M_COVR	
CATCOV	*1*
SORDAT	*20080225*
SORIND	*US,US,survy,H11399*
M_QUAL	
CATZOC	*U*
INFORM	*H11399, OPR-B310-NRT5-07, NOAA,NRT-5, S3002*
POSACC	*10*
SORDAT	*20080225*
SORIND	*US,US,survy,H11399*
SUREND	*20080225*
SURSTA	*20070423*
DEPARE	
DRVALV 1	*0.0*
DRVALV2	*54.0*
SORDAT	*20080225*
SORIND	*US,US,nsurf,H11399*

ATLANTIC HYDROGRAPHIC BRANCH
EVALUATION REPORT to Accompany
Surveys H11399 (2008)

This Evaluation Report has been written to supplement and/or clarify the original Descriptive Report. Sections in this report refer to the corresponding sections of the Descriptive Report.

B. DATA ACQUISITION AND PROCESSING

B.1 DATA PROCESSING

The following software was used to process and review data at the Atlantic Hydrographic Branch (AHB):

CARIS HIPS/SIPS version 6.1 SP2 HF 1-4
CARIS BASE Manager 2.1 SP1 HF 1-8
CARIS HOM ENC 3.3
PYDRO, version 8.7 r2586
CARIS S-57 Composer 2.0

B.2 QUALITY CONTROL

H-Cells

The AHB source depth grid was generated from the field 75cm MBES source grids and a 5m resolution VBES grid created from an extraction of the shoal layer. This process was used to create a 5m resolution combined surface which survey scale soundings were extracted from the AHB generated 5m Base surface at a 1:10000 scale using a radius of 1m. Soundings were selected for charting by hand using the latest raster charts 12331 and 12332. Soundings were then checked for conflicts, corrected to remove conflicts, and edited to allow for proper sounding compilation placement with respect to existing charted depths outside the survey area. The BASE surface was referenced when selecting the chart scale soundings, to ensure that the selected soundings portrayed the bathymetry within the common area.

Depth curves were drawn from the Base surface by hand. The contours are included in the final H-Cell product. The curves were utilized during chart scale sounding selection at AHB.

The compilation products and Stand Alone HOB Files (SAHOB) are detailed in the Compilation Process Log of this document. All individual SAHOB files were assembled in BASE Editor during H-Cell compilation.

The completed H-Cell was exported as a Base Cell File (ENC.000) in S-57 format with all values in metric units. The metric equivalent ENC.000 file was then converted to NOAA chart units (ENC_CS.000) with all values measured in feet following NOAA sounding rounding rules.

The H11399 CARIS H-Cell final deliverables include the following products:

H11399_CS.000	1:15,000 Scale	H11399 Selected Soundings (Chart Scale)
H11399_SS.000	1:10,000 Scale	H11399 Selected Soundings (Survey Scale)

JUNCTIONS

H11398 (2007) to the north

The present survey junctions to the north end with survey H11398 (2007). Present survey soundings are 1 foot shoaler than survey H11398 (2007).

C. VERTICAL AND HORIZONTAL CONTROL

Final vertical correction processing was completed by the field unit with no additional corrections required by Atlantic Hydrographic Branch personnel. The field unit applied verified water levels in conjunction with the preliminary tidal zoning which was accepted and approved by N/OPSI CO-OPS as the final zoning for H11398. Sounding datum is Mean Lower Low Water (MLLW). Vertical datum is Mean High Water (MHW).

Horizontal control used for this survey during data acquisition is based upon the North American Datum of 1983 (NAD83), UTM projection zone 18. Office ENC processing of this survey required translating the datum to meet S-57 ENC requirements. The horizontal geodetic datum was translated to Latitude and Longitude (LLDG) World Geodetic System-84 (WGS-84) during CARIS Base Manager processing.

D. RESULTS AND RECOMMENDATIONS

Chart Comparison **12331 (31st. Edition, Jul. /05**
Corrected through NM, Jul. 09/05
Corrected through LNM, Jun. 28/05
Scale 1:15,000

Chart Comparison **12332 (22nd. Edition, Jan. /06**
Corrected through NM, Jan. 14/06
Corrected through LNM, Jan. 3/06
Scale 1:20,000

ENC Comparison **US5NJ11M**
Raritan Bay and Southern Part of Arthur Kill
Edition 19
Update Application Date 2009-07-09
Issue Date 2009-07-22
References: Charts 12331

ENC Comparison **US5NY1BM**
Raritan River Raritan Bay to New Brunswick
Edition 12
Update Application Date 2009-07-08
Issue Date 2009-07-22
References: Charts 12332

Hydrography

The charted Hydrography originates with prior surveys and requires no further consideration. The hydrographer makes adequate chart comparisons in Appendix 1 and 2. of the Descriptive Report. The following should be noted:

The charted controlling depths of the channels within the limit of present survey were determined during office processing to be subsequent to present survey data. No change in charting is recommended.

Numerous charted ***dredge areas*** were brought forward form the ENC to supplement the present survey. The areas were not completely covered by the present survey. It is recommended that the ***dredge areas*** be retained as charted.

A charted ***mooring facility*** in the vicinity of Latitude 40°31′58″N, Longitude 74°15′08″W was disproved by present survey multibeam and side scan sonar. It is recommended that the ***mooring facilty*** be deleted.

Adequacy of Survey

The present survey is adequate to supersede the charted bathymetry within the common area. Any features not specifically addressed either in the H-Cell File or the Blue Notes should be retained as charted. Refer to the Descriptive Report for further survey requirements recommended by the hydrographer.

Miscellaneous

Chart compilation was done by Atlantic Hydrographic Branch personnel, in Norfolk, Virginia. Compilation data will be forwarded to Marine Chart Division, Silver Spring, Maryland. See Section D.1. of this report for a list of the Raster Charts and Electronic Navigation Chart (ENC) used for compiling the present survey.

APPROVAL SHEET
H11399

The completed survey has been inspected with regard to survey coverage, delineation of depth curves, representation of critical depths, cartographic symbolization, and verification or disproval of charted data. All revisions and additions made to the H-Cell files during survey processing have been entered in the digital data for this survey. The survey records and digital data comply with National Ocean Service and Office of Coast Survey requirements except where noted in the Descriptive Report and the Evaluation Report.

All final products have undergone a comprehensive review as per the Atlantic Hydrographic Branch Processing Manual and are verified to be accurate and complete except where noted.

Norris Wike
Digitally signed by Norris Wike
DN: cn=Norris Wike, o=NOAA, ou=AHB, email=norris.a.wike@noaa.gov, c=US
Date: 2009.08.25 07:31:04 -04'00'

Norris A. Wike
Cartographer
Atlantic Hydrographic Branch

I have reviewed the H-Cell files, accompanying data, and reports. This survey and accompanying Marine Chart Division deliverables meet National Ocean Service requirements and standards for products in support of nautical charting except where noted.

Approved: Richard T. Brennan
I am approving this document
2009.08.25 11:47:45 -04'00'

Richard T. Brennan
Commander, NOAA
Chief, Atlantic Hydrographic Branch

Kelly Kriner
AWOIS Check
2009.09.03 10:38:00 -04'00'